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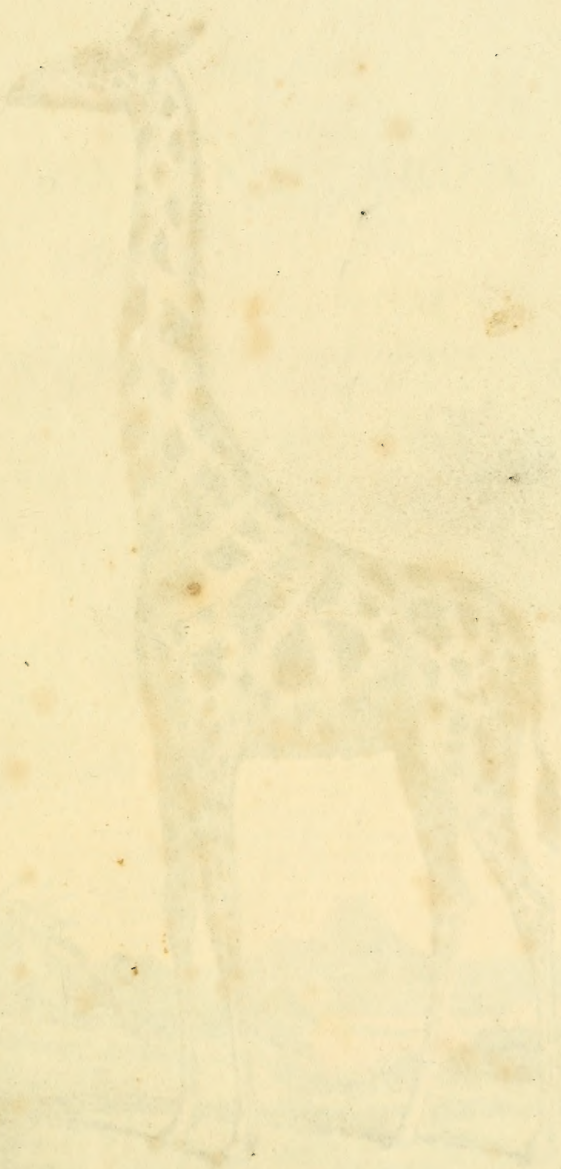

Cameleopard.

Pub. by W. Bullock London Museum Piccadilly April 1812.

A COMPANION

TO

MR. BULLOCK'S

LONDON MUSEUM

AND

PANTHERION;

CONTAINING

A BRIEF DESCRIPTION

OF UPWARDS OF FIFTEEN THOUSAND

NATURAL AND FOREIGN CURIOSITIES,

ANTIQUITIES,

AND

Productions of the Fine Arts,

Collected during Seventeen Years of arduous Research, and at an Expense of

THIRTY THOUSAND POUNDS;

And now open for Public Inspection in the

Egyptian Temple,

JUST ERECTED FOR ITS RECEPTION, IN

PICCADILLY, LONDON,

OPPOSITE THE END OF BOND-STREET;

BY WM. BULLOCK,

FELLOW OF THE LINNÆAN SOCIETY, AND HONORARY MEMBER OF THE DUBLIN SOCIETY.

O Nature! how in every charm supreme!
Whose vot'ries feast on raptures ever new,
O! for the voice and fire of Seraphim,
To sing thy glories with devotion due! BEATTIE.

THE TWELFTH EDITION.

PRINTED FOR THE PROPRIETOR.

1812.

The full value given for rare and uncommon Quadrupeds, Birds, Fishes, Reptiles, Shells, Old Paintings, Carvings on Wood or Ivory, Stained Glass, ancient and foreign Arms and Armour, or any uncommon production of Art or Nature.

Reynell, Printer, Piccadilly, London.

ADDRESS.

Mr. BULLOCK respectfully begs leave to solicit the attention and patronage of the Nobility, Gentry, and the Public, to an Establishment for *the advancement of the Science of Natural History*, which in magnitude and expense, he presumes, is unparalelled, as the work of an individual.

The very flattering and general approbation which honoured the Exhibition of his MUSEUM on its first opening in a temporary situation in London, was a convincing proof that his future efforts for the extension and improvement of the Collection would be duly appreciated. His exertions to obtain articles of rarity and interest have, therefore, been unceasing. In most departments, the subjects have been doubled in number; the specimens are choice, in the highest possible preservation, and are arranged according to the Linnæan system. They consist of about Fifteen Thousand species of Quadrupeds, Birds, Reptiles, Fishes, Insects, Shells, Corals, &c. &c. collected during twenty years of unwearied application, and at an expense exceeding thirty thousand pounds.

In adapting the Edifice which Mr. BULLOCK has just completed for his present Collection, by displaying it advantageously for the Study of the Naturalist, the Instruction of the Curious, and the Amusement of those who are delighted in viewing the Beauties of Nature, or the Curiosities of Art, he has endeavoured to render it worthy of the British Metropolis, whilst he has also provided the means for enlargement, as future additions shall accumulate.

One department of the Museum (the Pantherion), completed with much labour and great expense, is entirely novel, and presents a scene altogether grand and interesting. Various animals, as the lofty Giraffa, the Lion, the Elephant, the Rhinoceros, &c. are exhibited as ranging in their native wilds and forests; whilst exact Models, both in figure and colour, of the rarest and most luxuriant Plants from every clime, give all the appearance of reality; the whole being assisted with a panoramic effect of distance and appropriate scenery, affording a beautiful illustration of the luxuriance of a torrid clime.

The Museums of France have been enriched with the spoils of nearly the whole Continent, and the Gallery of the Louvre contains more treasure in Painting and Sculpture than perhaps will ever again be amassed in one Collection. But though her active and persevering Ruler, desirous of making his capital the centre of every attraction, has contributed to the Museum Naturale, every specimen of Natural History which in the present state of the Continent could be procured, our unrivalled Navy, and the extension of our Colonies throughout the habitable world, present such advantages to this country, that the writer feels confident, that if his exertions are seconded by the Public as

they have hitherto been, he will very shortly be enabled to make a Collection of Natural History far surpassing any thing of the kind at present in existence; and he pledges himself to exert his utmost power in accomplishing this important work.

To the numerous Royal, Noble, and liberal Contributors to his Museum, by whose kindness his Collection has been enriched by so many valuable articles, which could not have been procured by pecuniary means, Mr. Bullock returns his unfeigned thanks.

When the information and delight which may be derived from this Exhibition, especially by the rising generation, are considered, the great sum expended in forming it, and the erection of the present large and commodious building for its reception, the Proprietor trusts that the terms will be approved of.

Admission to each Exhibition, One Shilling.----Annual Ticket, not transferable, 1*l.* 1*s.*----Subscriber for Life, 10*l.* 10*s.*

Museum, Piccadilly,
March 28, 1812.

NAMES

OF THE

LADIES AND GENTLEMEN

WHO HAVE PRESENTED CURIOSITIES TO THE

Museum.

HER MAJESTY.

Her Royal Highness the

PRINCESS CHARLOTTE OF WALES.

Their Royal Highnesses the

DUKE AND DUCHESS OF YORK.

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Ashton, N. Esq.	*Liverpool*
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Barr, Captain	*Liverpool*
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Bligh, Mrs.	*Durham Place*
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Caldwell, Charles, Esq.	*Liverpool*
Campbell, Captain	*Liverpool*
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Clarke, Rev. Dr.	*London*
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Directors of the Blue-coat School	*Liverpool*
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York, Dean of
Young, Dr. F. L. S.. ..... *Sheffield*

A

COMPANION

TO THE

Pantherion.

NATURAL HISTORY.

QUADRUPEDS.

These are thy glorious works, Parent of Good.
* * * * * * * * * * * * * *
Thou sitt'st above those heavens
To us invisible, or dimly seen
In these thy lowest works; yet these declare
Thy goodness beyond thought, and power divine.

MILTON.

THE PANTHERION is an exhibition of Natural History, on a plan entirely novel, intended to display the whole of the known Quadrupeds, in a manner that

will convey a more perfect idea of their haunts and mode of life than has hitherto been done, keeping them at the same time in their classic arrangement, and preserving them from the injury of dust and air: it occupies an extensive apartment, nearly forty feet high, erected for the purpose. The visitor is introduced through a basaltic cavern (of the same kind as the Giants Causeway, or Fingall's Cave, in the Isle of Staffa) into an Indian hut, situated in a Tropical Forest, in which are displayed most of the Quadrupeds described by naturalists, with correct models from nature, or the best authorities, of the trees and other vegetable productions of the torrid climes, remarkable for the richness or beauty of their fruit, or the singularity of their foliage; the whole assisted by an appropriate panoramic effect of distance, which makes the illusion produced so strong, that the surprised visitor finds himself suddenly transported from a crowded metropolis to the depth of an Indian forest, every part of which is occupied by its various savage inhabitants.

The Linnæan arrangement of Quadrupeds commences at the first opening on the left-hand of the entrance, where, dispersed on rocks and the branches of a large Orange-tree, are about sixty species of the genus Simia; consisting of Apes, Baboons, and Monkeys. It is difficult to determine the species of many of them, and others are not yet described by any Naturalist; those known are numbered, and will be found as follows:

MONKEYS.

1. The *Barbary Ape*, or *Magot* (Simia Inuus) Is a morose, ill-natured animal, but by means of severity may, in a state of captivity, be made to perform a number of actions which surprise us, by their near approach to those of man.

2. The *Pig-tailed Baboon* (Simia Nemestrina).
Is a native of Sumatra, and is very familiar and gentle in its behaviour towards strangers, but appears melancholy in a state of captivity.

3. *Variegated, Tufted,* or *Ursine Baboon* (Simia Mormon).
This Baboon is very numerous about the Cape of Good Hope, and is one of the largest of this tribe of animals, measuring when full grown, nearly five feet in height. It is very strong, fierce, and libidinous, yet at the same time is capable of attachment and gratitude. One that was sent to me in the year 1803, had two deep wounds in his loins, owing to the pressure of a heavy chain by which he was confined; on appearing anxious to examine the wounds, it readily presented the lacerated part to inspection, and after one side was dressed with a very sharp mixture (though at the same time it was agonized with pain) it opened the other wound for the same application, which it continued to do until such time as the excoriated places

were healed. It remained at the Museum some time afterwards, and although mischievous to the family, yet, on the least motion of my hand, or on my uttering an angry word, it was all attention and submission. These Baboons in their native country do considerable damage to the gardens and plantations, carrying on their depredations in large troops, with such boldness and resolution, as excite astonishment.

4. *Ribbed-nose Baboon* (Simia Maimon).

Is about two feet from nose to tail, an active and sprightly animal, greatly resembling the above Baboon, but not so large, nor the colours so bright, and is playful, but not so malignant.

The French naturalists have made this the young of the former, and from the change I have observed in those of different ages, I have no doubt of their being right.

5 and 6. *Lion-tailed Baboon,* male and female (S. Silenus).

These are very remarkable and highly extraordinary animals; they are natives of Ceylon and other parts of India, and are, in their native state, wild, ferocious, and mischievous: the female lived many years in the menagerie of her Royal Highness the Duchess of York, who presented it to the Museum.

7. *Wood Baboon* (S. Silvatica).

An active, roving species, inhabiting the woods of Africa.

8. *Crested Baboon* (S. Cristata). A native of India.

9. *Dog-faced Baboon* (Simia Hamadryas).

A very large and fierce species, remarkable for the

long grey hair with which it is covered; is rarely brought to Europe; is a native of the hottest part of Africa, where it is said to be found in vast troops, and to be very fierce and dangerous.

This was brought from Arabia by Lord Valentia.

10. *Green Monkey* (Simea Sabæa).

A most gentle, playful creature, inhabiting several parts of Africa and India; in its native regions it is said to be of a beautiful green colour, which fades to an olive grey soon after its arrival in this country.

11. The *Mustache* (S. Cephus). Inhabits Guinea.

12. *White eyelid Monkey* (S. Æthiops).

A native of Madagascar, gentle and diverting in its manners.

13. The *Chinese Monkey* (Simia Sinica).

14. *White-nosed Monkey* (Simia Petaurista).

A native of Guinea, only thirteen inches high; tail twenty inches long. An entertaining, gentle animal, shewing great attachment to the person who feeds it.

15. The *Negro-Monkey* (Simia Maura). From Africa.

16. *Palatine Monkey* (Simia Rolaway).

This beautiful and gentle animal was brought from the Slave Coast in Africa; its colour appeared to have changed much on its being confined, as the rich bay on the inside of the limbs was turned to a yellowish white; its singular white beard gave it, whilst living, an air of great gravity, and its manners were quite inoffensive and mild. It died in the collection of Mr. Polito, in the winter of 1808, owing probably to the severity of the weather.

17. *Long-nosed Monkey* (Simia Nasuta).

18, 19, and 20. Three specimens of the *Long-armed, Four-fingered,* or *Spider Monkey* (Simia Paniscus).

One of these was received from South America in the summer of 1808, and lived for some time. In general, its appearance was extremely disgusting; the arms were of an extraordinary length, and the hands destitute of all appearance of thumbs; the tail is also of a great length, is bare for a considerable way near the tip, by means thereof it could reach any thing as well as with its hands. The whole animal, except the face, hands, and end of the tail, is covered with long coarse black hair, thinly disposed, except on the head, where it grew forward in the same manner as the human species, giving to its mulatto-coloured face the appearance of a miserably wretched old man. Its disposition was extremely gentle and inoffensive, but so timid, as never to be familiar; if held by the hands, it uttered a doleful cry, and frequently tears ran from its eyes, but never shewed the least inclination to bite.

21. A white variety of the above.

22. *Royal Monkey* (Simia Seniculus).

Is a native of Cayenne, and is sometimes called the *Preacher,* or *Howler,* from their custom of assembling together, and making a most horrible noise in the woods.

23 and 24. *Fearful,* or *Ring-tailed Monkey* (Simia Trepida).

Native of Guinea; of a lively disposition: is frequently kept in France.

25 and 26. Varieties of the above.

27 and 28. Male and female of the *Squirrel Monkey* (Simia Sciurea).

This is one of the smallest and most beautiful of the Monkey tribe; is a native of South America, and with difficulty kept alive in this country.

29. *Fox-tailed Monkey* (Simia Pithecia).

The hair of this singular animal is very long, and of a dark brown, or nearly black colour; it is about the size of a large cat; is a native of Guinea, and is said to be very fierce in its disposition.

30. Several specimens of the *Striated Monkey*, or *Sanglin* (Simia Jacchus).

This extraordinary little animal, no larger than a Squirrel, is an inhabitant of Brazil. In a native state these Monkies are supposed to feed upon fruits, but in a state of confinement they will occasionally feed on insects, snails, &c. Edwards, in his Gleanings, makes mention of a pair of these animals, which belonged to a London merchant, who resided at Lisbon; they had young at that place. These, at their birth, were exceedingly ugly, having no fur: they would frequently cling fast to the teats of the dam; and when they grew a little, used to hang upon her back and shoulders. When she was tired, she would rub them off against the wall, or whatever else was near, as the only mode of ridding herself of them. On being forced from the female, the male immediately took them to him, and suffered them to hang round him, to ease her of the burden.

Her Royal Highness the Duchess of York has lately succeeded very well in breeding these diminutive and delicate little animals.

31 and 32. The *Great-eared Monkey* (Simia Midas).

About the size of a Squirrel; the colour black, except the hands and feet, which are orange. It is a native of Cayenne and Brazil.

Red Monkeys (Simia Rubra), male and female.

Natives of Senegal and the hottest parts of Africa; a harmless and playful species.

Pigmy Lemur.

Pub. by W. Bullock, London Museum, Piccadilly, April 1812.

MAUCAUCOS (LEMUR).

These are placed on the branch of a tree, near the third window. They are generally mild and gentle in their disposition, and inhabit the warmer parts of India.

1. *Slow Lemur,* or *Tailless Maucauco* (Lemur Tardiradus).

About half the size of a cat, and is a native of the coast of Coromandel. According to the pleasing description of the late learned Sir Wm. Jones, in the 4th volume of Asiatic Researches, its manners are gentle and interesting; it sleeps during the day, and feeds on fruits.

2. *Woolly Lemur,* or *Mongoz* (Lemur Mongoz).

About the size of a cat, is a native of Madagascar, feeds on fruits, and in a state of captivity is sportive and harmless.

3. The *Potto* (Lemur Potto).

This is an inhabitant of Guinea.

4. *Ring-tailed Lemur,* or *Maucauco* (Lemur Catta).

This is a very beautiful, gentle, harmless, and entertaining animal, frequently kept tame by ladies; it is a native of the warmer parts of India, and feeds on fruit, which it eats sitting upright, and holding in its fore paws. The young ones were lately bred in this country.

5. *Little Maucauco* (Lemur Minutus).

Is about the size of a mouse; is an elegant little

animal, and bears a strong resemblance to the Monkey tribe; is the only specimen known in England.

Dr. Shaw has figured a small Lemur in the 14th volume of the Naturalists Miscellany, but it is much larger, and destitute of the mane, so conspicuous in this species.

BATS, (VESPERTILIO).

These are placed in front of the Lion's Den, opposite the entrance.

Madagascar, or *Vampyre Bat* (Vespertilio Vampyrus).

This uncommon animal is called, by Buffon, the *Rousette;* it measures upwards of 3 feet from the tip of one wing to the other; the body is nearly as large as that of a cat, but it resembles a rat in the shape of the head; it is covered with short hair of a reddish brown colour; the top of each wing is armed with a strong claw, with which it fastens itself to the branches of trees; it has likewise five sharp claws on each foot. Some of those animals grow to an enormous size; and in the islands of the East Indies they are sometimes seen in such numbers, that they darken the air at noon-day: they are carniverous, and very ferocious. In a scarcity of flesh and fish, they feed

on vegetables and fruits of every kind. This is the Bat to which Linnæus applied the title of Vampyre, on the supposition of its being the species of which so many extraordinary accounts have been given relative to its power of sucking the blood of men and cattle.

In the autumn of 1810 I had, for a short time, a living one of a large size, from the East Indies, and contrary to what has been asserted of it by writers, found it a most inoffensive, harmless, entertaining creature; it refused animal food, but fed plentifully on succulent fruits, preferring figs and pears, and licked the hand that presented them, seeming delighted with the caresses of the persons who fed it, playing with them in the manner of a young kitten; it was fond of white wine, of which it took near half a glass at a time, lapping it like a cat. This had a very evident effect on its spirits, as it then became extremely frolicsome and diverting, but never once attempted to bite. It slept suspended, with its head downwards, wrapping its satin-like wings round its body in the form of a mantle. I several times permitted it to enclose the end of my little finger in its mouth, for the purpose of observing if it would attempt to draw blood, but not the slightest indication of such intention appeared, and I have strong reason to doubt the stories related so greatly to its disadvantage.

Madagascar Bat, with the wings closed.

The *Long-eared Bat* (Vespertilio Auritus).

This is one of the most common English Bats, and may be frequently seen, during the summer evenings, pursuing the various insects on which it feeds.

In the same Case is a White variety of this animal,

in which the delicate and admirable structure of the wings is finely shewn.

The *Great Bat* (Vespertilio Noctula). The largest of the British species.

The *Horse-shoe Bat* (Vespertilio Ferrum Equinum) with its young ; taken in the Abbey Church, Bristol.

SLOTH (BRADYPUS TRYDACTYLUS).

Three of these are on the stem of the American Aloe, near the head of the Rhinoceros.

These are of all quadrupeds the most slothful and indolent. "Nature (says the Count de Buffon) seems "to have created this ill-constructed mass of defor-"mity for nothing but misery." They have neither canine nor incissive teeth; their eyes are dull and heavy, their mouths wide and thick; their fur resembles dried grass ; their thighs are almost disjointed from their haunches ; their legs are very short and badly shaped ; they have no soles to their feet, nor toes separately moveable ; but only two or three claws, excessively long, crooked downwards and backwards. They can neither seize on prey, nor feed on flesh, and are therefore reduced to live on leaves and wild fruits. They take up a long time in crawling to a tree, and are still longer in climbing

1 Sanglin.
2 Three toed Sloth.
3 Long tailed Manis.
4 Lesser Ant eater.
5 Nine banded Armadilla.
6 Porcupine Ant Eater.

Pub. by W. Bullock, London Museum Piccadilly, April 1, 1812.

to its branches. When at last one of them has accomplished its end, it fastens itself to a tree, crawls from branch to branch, and by degrees strips the whole of its foliage; in this manner it remains several weeks without moistening its food; and when it has consumed its store, and the tree is left quite naked, unable to descend, it continues on till hunger presses, which becoming more powerful than the fear of danger, or even death itself, it drops to the ground, without being capable of exerting any effort to break the violence of the fall. Its manners are sluggish to an excessive degree; its general appearance disgusting; its voice plaintive, piteous, and even horrible. It can live a prodigious time without food: Kircher says forty days. It has vast strength in the paws, and fastens its claws into any thing with such force, that they cannot be disengaged: hence, when beasts of prey attack this animal, it adheres to them so strongly, that they are both found dead in each other's grasp.

ANT-EATERS (MYRMECOPHAGA).

These are placed next the Monkeys, near the model of one of the Turrets, or Nests of the Termitus or White Ants of Africa, which are often of the height of ten feet, appearing at a distance like the villages of the natives.

The Ant-eaters are destitute of teeth, but have protruding snouts, through which they draw the insects which form their food on their long clammy tongues.

The *Great Ant-eater*, or *Tamanoir* (Myrmecophaga Jubata).

This is the largest of the Ant-eaters, as well as the most singular in its appearance; it is upwards of six feet in length, and has a very slender snout, out of which it protrudes its worm-like tongue into the nests of ants, on which it feeds. It is a native of South America, from whence one was some years since brought alive to Spain: it was fed on raw meat, cut small, of which it ate four or five pounds a day.

The *Cape Ant-eater* (Myrmecophaga Capensis).

Though the above is called the largest of this remarkable family, yet this may be considered the heaviest, as its weight sometimes exceeds 100lbs. It burrows in the ground and sleeps by day.

Little Ant-eater (Myrmecophaga Didactyla).

Inhabits Guinea, and the hottest parts of South America. They climb trees in quest of a species of ant that builds its nest among the branches; they thrust out their clammy tongues into the nest, and draw them into their mouths covered with insects. Their tail is of great use to them in climbing, as they twist it round the branches to prevent falling.

Middle Ant-eater (Myrmecophaga Tetradactyla).

Inhabits South America, goes out in the night, and sleeps during the day; when irritated, it seizes on a stick or other object with its fore claws, and fights sitting on its hind legs; the extremity of the tail is

naked and prehensile, by means of which it is enabled to suspend itself to the branches of trees.

Porcupine Ant-eater (Myrmecophaga Aculeata, Shaw's Zoology, vol. 1, page 175).

This is one of those curious animals which have been lately discovered in New Holland; it differs from all the other Ant-eaters in having the body covered with sharp spines, resembling porcupines' quills, only they are shorter and thicker in proportion. It has a remarkably long, tubular snout, with a very small mouth, out of which it shoots its tongue, in the same manner as the others. It burrows under the ground with the greatest ease, nature having furnished it with amazing strength in its legs and feet.

Another *Porcupine Ant-eater,* varies from the above in the lightness of the colour of the spines, and their being shorter, and more covered with stiff whitish hair; probably of a different sex, or a younger animal.

The *Manis*, or *Scaly Ant-eaters*, are placed with the last, to which they have a strong affinity, except the covering of the body, which in these are strong, horn-like scales.

Pangolin, or *Short-tailed Manis* (Manis Pentadactyla).

A remarkably fine specimen of this extraordinary and highly curious animal, measuring five feet in length; it is a native of Africa and India, and its principal food is the white ant, against the united attacks of which Nature has given its impenetrable coat of armour. It was brought to this country by Mr. Samwell, Surgeon, who was with Captain Cook during his voyages of discovery.

Long-tailed Manis (Manis Tetradactyla).

This rare animal is a native of India and Africa. It is perfectly gentle and harmless, though it has the most formidable appearance, being entirely covered with large sharp scales, which it erects when irritated. Buffon says "The most cruel and voracious of beasts, "such as the Tiger and the Panther, make but use- "less efforts to devour these armed animals; they "tread upon and roll them, but when they attempt "to seize them, are grievously wounded; they "can neither terrify them by their violence, nor "crush them by their weight."

Another specimen of this singular animal, near it, differs in having double the number of scales, which are only half the size.

Near the above, are two specimens of the nine-banded *Armadillo*, with a young one, and one of the eight-banded.

It receives the name of Armadillo, or Hog in Armour, from the Spaniards, and from the impenetra-

. Short-tailed . Manis.

Pub.by W.Bullock, London Museum Piccadilly April.1.

Rhinoceros.

Pub.d by W. Bullock London Museum Piccadilly April 1.1812.

ble coat of mail with which it is furnished by nature for its defence. It is a native of South America, where there are several kinds; but the principal difference consists in the number of bands or folds, of which the armour that covers the body is composed. It is a harmless, inoffensive animal, feeds on roots, herbs, and other vegetables, grows very fat, and is much esteemed for the delicacy of its flesh. The Indians hunt it with small dogs, trained for the purpose: when it is surprised, it runs to its hole, or attempts to make a new one, which it does with great expedition, having strong claws on the fore feet, with which it adheres so firmly to the ground, that if it should be caught by the tail, whilst making its way into the earth, its resistance is so great that it will sometimes leave its tail in the hands of its pursuers; to avoid this the hunter has recourse to artifice, and by tickling it with a stick, it gives up its hold, and suffers itself to be taken alive. If no other means of escape be left, it rolls itself up within its covering, by drawing in the head and legs, and bringing the tail round them, as a band to connect them more forcibly together; in this situation it sometimes escapes by rolling itself over the edge of a precipice, and generally falls to the bottom unhurt.

Next to these is the huge *Rhinoceros* (Rhinoceros Unicornis) which may be considered as one of the most powerful of animals; in strength, indeed, he is inferior to none, and his bulk (says Bontius) equals the Elephant, but is lower only on account of the shortness of his legs. The length of the Rhinoceros, from head to tail, is usually twelve feet; and the circumference of the body nearly equals that length: its nose is armed with so hard and formidable a horn, that the Tiger will rather

attack the Elephant, whose proboscis he can lay hold of, than the Rhinoceros, which he cannot face without danger of having his bowels torn out by the defensive weapon of his adversary. The body and limbs of the Rhinoceros are covered with a skin so hard and impenetrable, that he fears neither the claws of the Tiger, nor the trunk of the Elephant. It is said to turn the edge of a scymetar, and to resist even the force of a musket-ball. The upper lip of the Rhinoceros is capable of great extension, and is so pliable, that the animal can move it from side to side, twist it round a stick, collect its food, or seize with it any thing it would carry to its mouth. The Rhinoceros, without being ferocious, or carniverous, is totally untractable and rude: it seems at times to be subject to paroxysms of fury. The one which the King of Portugal sent to the Pope, in the year 1513, destroyed the vessel which transported it. Like the hog, the Rhinoceros wallows in the mire, is a solitary animal, and delights to rove near the banks of rivers. It is found in Bengal, Siam, China, and other countries of the East, where it feeds on the grossest herbs, preferring thistles and shrubs to the finest of pasturage. The female produces but one at a time, which during the first month exceeds not the size of a large dog: at the age of two years, the horn is not more than an inch long; at six years old, it is ten inches long, and grows to the length of three feet.—From the peculiar construction of his eyes, the Rhinoceros can only see what is immediately before him. When he pursues any object, he proceeds always in a direct line, overturning any thing in his way. His sense of smelling is so acute, that his pursuers are obliged to avoid being to windward of him: they follow him at a distance, and watch till he lies down to sleep; they then approach

and discharge their muskets into the lower part of his belly.

A fine specimen of the *Elephant* (Elephas Maximus). This stupendous animal lived for many years in Exeter 'Change, and was remarkable for its docility and obedience to its keeper. For a further description of this identical animal, see "Wonders of Animated Nature," just published, p. 111.

BEASTS OF PREY (FERÆ).

Close to the Elephant commence those animals denominated by Linnæus, Feræ, which contain all the beasts of prey.

1. In a low den is the *Wolf* (Canis Lupus) from Hudson's Bay; it is of an unusual size, and the colour is lighter than those of Europe.

2. The *Striped Hyæna* (Canis Hyæna).
A young animal from the Cape of Good Hope, little more than half its full size.

3. The *Jackal* (Canis Aureus).
These inhabit the warm parts of Asia and Barbary, prowling by night, sometimes in flocks of two

hundred together, hunting in concert: at the cry of one, all within hearing howl prodigiously, and urge other beasts to hunt the stag, whilst the Lion or Tiger, lying in wait, seize the prey, and first satisfying themselves, leave the remainder to the Jackals; from whence originates the tale of their being the Lion's provider.

4. The *Barbary Jackal* (Canis Barbarus).

5. *Cape Jackal* (Canis Mesomelas).

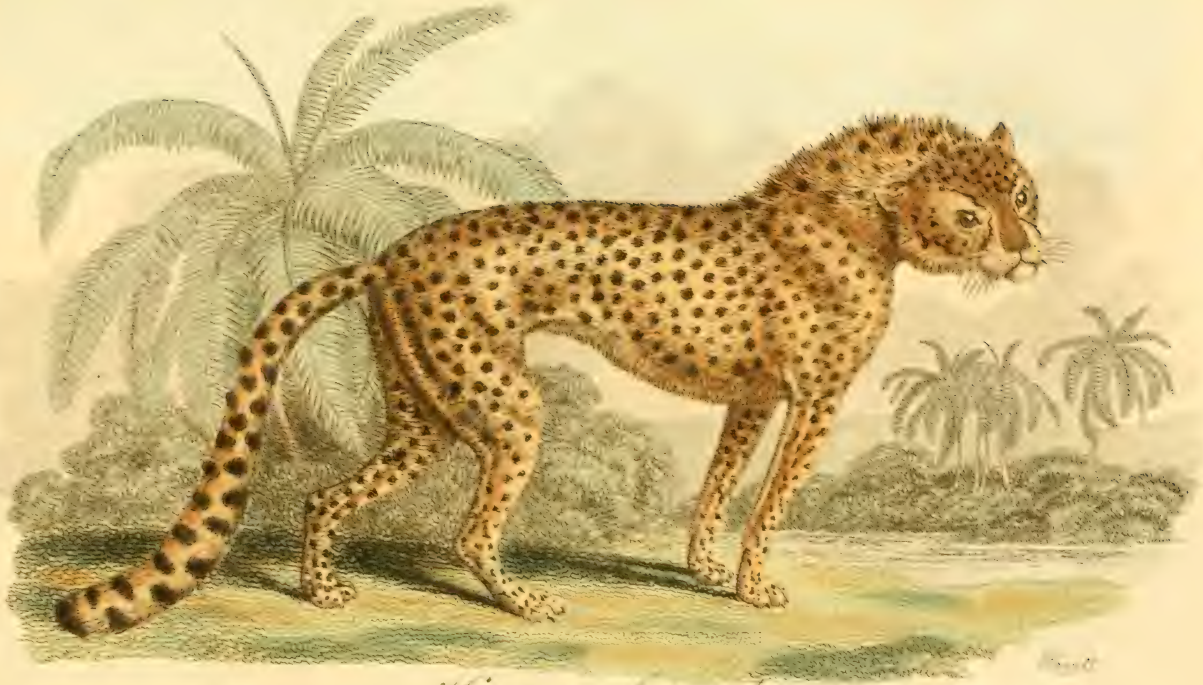
6. *Black Fox* (Canis Lycaon).

This inhabits the colder parts of America, and is said to be the most crafty of its tribe; its skin is also of the greatest value, as fur.

7. The *Arctic Fox* (Canis Lagopus), in its summer dress.

8. and 9. Ditto in its winter cloathing.

These inhabit the most northern parts of America; frequent the sea shore, and occasionally feed on shell fish.



Hunting Leopard.

Pub. by W. Bullock, London Museum Piccadilly April 2. 1812.

FELINE TRIBE.

In dens, and on the large rocks facing the entrance, are disposed the whole of the Feline tribe, containing the most cruel and rapacious of animals.

In a cavern, is the *Lion* (Felis Leo), and near its feet, sleeping on the ground, a Cub about four months old.

2. The *Panther* (Felis Pardus).

Is seen issuing from a den: it is an untameable animal, and next in size to the tiger. It inhabits Africa, Barbary, the remotest parts of Guinea, and the interior of South America; is extremely fierce, and attacks every living creature without distinction, but happily prefers the flesh of brutes to that of mankind. The ancients were well acquainted with these animals. The Romans drew prodigious numbers from Africa, for their public shows. Scarus exhibited 150 of them at one time; Pompey 410; and Augustus 420. They probably thinned the Coast of Mauritania of these animals; but they still swarm in the southern parts of Guinea. The skin of the Panther was presented by Mr. Polito.

3. The *Jaguar* (Felis Onca).

Is a most fierce and destructive animal, in its manner resembling the Tiger. It is an inhabitant of South America.

4. Walking on the top of the rock, above the Lion's den, is the *Hunting Leopard* (Felis Jubata).

This animal was received from Senegal, and was perfectly tame, having never been subject to confinement. In India they are trained for the taking of game: three living ones were shewn a few years since in the Tower, that were part of a pack belonging to the late Tippoo Sultan. This animal has not retractile or sheathed claws, like the rest of the feline tribe.

5. The *Black Leopard* (Felis Discolor).

This was of a most untameable and ferocious temper, which it constantly exhibited, without distinguishing the person that fed it from others. It is said to be an inhabitant of Java.

6. The *Puma,* or *American Lion* (Felis Concolor), with its young.

This is the largest of the American beasts of prey, sometimes measuring five feet from the nose to the insertion of the tail. It is an animal of great strength and fierceness, sometimes climbing trees, and springing at whatever may pass beneath. The young were produced at Exeter-'Change, and are remarkable for the spots with which they are covered whilst in a state of infancy.

7. *Margay,* or *Tiger Cat* (Felis Tigrina).

This diminutive species has all the evil propensities and appetites for rapine of the Tiger; it resides principally on trees, preying on birds. It is a native of South America.

8. The *Serval* (Felis Serval).

Was received from Senegal; it likewise inhabits India and Thibet, residing mostly on trees, and avoiding man, unless when enraged.

9. *Cinerous Cat.* This appears to have been de-

scribed only by Mr. Pennant. It was a native of Senegal, and its disposition was not so fierce as the generality of its kind.

10. The *Persian Lynx* (Felis Caracal).

Was received from Senegal. It is sometimes tamed and used in the chace of the smaller Quadrupeds, also Herons, Cranes, Pelicans, &c.

11. *American Lynx* (Felis Lynx).

At the end of the rocks on which the above are placed, follow the

VIVERRA, OR WEASEL GENUS.

1. The *Ichneumon* (Viverra Ichneumon).

In India, but still more in Egypt, the Ichneumon has always been considered as one of the most useful and estimable of animals; since it is an inveterate enemy to serpents, rats, and other noxious creatures which infest those regions. In India it attacks with courage that most dreadful reptile, the Cobra de Capello, or Hooded Snake. It also diligently seeks for the eggs of crocodiles; for which reason, as well as for its general usefulness in destroying all manner of troublesome reptiles, it was held in such a high degree of veneration by the ancient Egyptians, as to be

regarded as a minor deity, or one of those benevolent beings proceeding from the Parent of the universe. For the purposes above specified, it is still domesticated by the Indians and Egyptians in the same manner as the cat in Europe; and it has also the merit of being easily tamed, and performing with alacrity all the offices of that creature. Like many others of this tribe, it is a most dangerous enemy to several animals larger than itself, over which it gains a victory and sucks their blood. In a wild state it frequents rivers in quest of prey, where it is reported to swim and dive like an Otter, and continues a length of time under water. As it is a native of warm climates, it of course is greatly injured by a removal to the cold regions of Europe, to the variations of which it generally falls a victim.

2. and 3. The *Coati Mondi,* or *Brasilian Weasel* (Viverra Nasua).

A native of South America. They may easily be domesticated. One that I kept a considerable time was so familiar, that it was with difficulty it could be kept from ascending to my shoulders, and when I was present would at any time attack any strange dog that approached his apartment. It afterwards conceived a strict friendship, which continued till death, for a long-armed Monkey (Simia Paniscus): they were inseparable companions; but I suspect the object of attraction was the warmth they received from each other in keeping close together.

4. *Striated Weasel* (Viverra Putorius).

It is a native of North America, and remarkable for the intolerable stench which it emits when irritated, which is so powerful as to prevent either men or dogs from pursuing it: even the clothes of persons

who are near it are obliged to be buried in the ground for some time before they can be purified.

5. The *Skunk* (Viverra Mephites).

This, like the last, defends itself by emitting so intolerable an odour, as to overpower whatever pursues it; this sometimes happens in the houses of the settlers in North America, when their whole stock of provisions are rendered useless.

6. The *Civet* (Viverra Civetta).

This Cat is sometimes erroneously called the Musk Cat. It is a native of the hottest climates of Africa and Asia; yet it is capable of living in temperate or even in cold countries, if it be carefully defended against the injuries of air, and provided with delicate and succulent food. The Civet Cat is a wild, fierce animal, and feeds on its prey in the same manner as the fox. In Holland they are frequently reared for the sake of their perfume, which greatly resembles musk. This is produced in a pouch under the tail; and those that keep them for this purpose put them into a long narrow box, in which they cannot turn; this box is opened behind twice or thrice a week by the person who collects the perfume, who drags the animal backwards by the tail, and keeps it in that situation by placing a bar before it, while with a small spoon he scrapes the odoriferous substance from the pouch in which it is produced.

7. *Three-striped Weasel* (Viverra Hermaphrodita).

It is a native of Barbary, and very destructive to poultry.

8. The *Genet* (Viverra Genetta).

This beautiful little animal was kept for some time alive, and was suffered to play at liberty in the

house: in some parts of the East it is domesticated, and is very useful in clearing the houses of vermin.

9. and 10. *Spotted Fitchets* of New Holland (Viverra Maculata).

11. The *Otter* (Mustela Lutra).

Is pretty generally diffused over Europe, North America, and Asia as far as Persia; it feeds principally on fish, and is very destructive to our ponds and rivers; it lives in holes under ground, the openings to which are beneath the surface of the water. The bite of the Otter is extremely severe, but they are capable of being tamed, and taught to fish for their owner, which they do with the greatest address, as they are capable of remaining a considerable time under water.

12. The *Pekan* (Mustela Canadensis).

13. The *Martin* (Mustela Foina).

Inhabits the woods of most parts of Europe, feeding on birds, and other smaller animals.

14. The *Pine Martin* (Mustela Martis).

Is occasionally found in the pine forests in the northern parts of our Island.

15. *Fisher Weasel* (Mustela Nigra).

16. The *Stoat*, or *Ermine* (Mustela Erminea).

Is found principally in the wilds of Russia, and other cold countries. It is from the skin of this animal that the valuable white fur is made. They are said to change their colour, being brown in summer and white in winter.

On a tree near these is the *Glutton* (Ursus Gulo).

A voracious animal, inhabiting the northern parts of Europe, Asia, and America: it preys on deer, hares, and the smaller quadrupeds, frequently concealing itself among the branches of trees, from whence, springing on the shoulders of whatever passes, it adheres firmly to them, till they drop from fatigue or loss of blood. Their skins are valuable as fur.

OPOSSUMS (DIDELPHIS).

Near the farthest corner from the entrance are placed the *Opossums* (Didelphis).

Till the discovery of New Holland, most of the then known animals of this genus were natives of America. Australasia has, however, added more new species to this extraordinary family than were before known: they are most remarkable for the abdominal pouch with which the females are furnished, which can be opened or shut at pleasure, in which the young are concealed in time of danger.

1. *Virginian Opossum* (Didelphis Opossum). Inhabits the warmer parts of America, climbs trees, and springs from branch to branch by means of its strongly prehensile tail.

2. The *Marmose* (Didelphis Murina).

3. *New Holland Opossum* (Didelphis Caudivolva). This has been brought alive to this country, and is a pleasing, cleanly animal.

4. and 5. *Kangaroo* (Didelphis Gigantea).

Of all the curious animals which the vast Island, or rather Continent of Australasia has presented to our view, the Kangaroo must be considered as one of the most extraordinary; its size, general conformation, teeth, and other particulars, conspiring to render it a most interesting object to every naturalist. The first discovery of this remarkable quadruped was in the year 1770, when

Capt. Cook was stationed on the Coast of New Holland. It is the only quadruped our colonists have yet met with in New South Wales that supplies them with animal food. There are two kinds; the largest that has been shot weighed about 140lbs. and measured from the point of the nose to the end of the tail 6 feet 1 inch; the tail 2 feet 1 inch; head 8 inches; fore leg 1 foot; hind legs 2 feet 8 inches; circumference of the fore part of the body near the leg 1 foot 1 inch; and of the hind part 3 feet. The smaller kinds seldom exceed 60lbs. This animal is furnished with a pouch similar to that of the Opossum, in which its young are nursed and sheltered. It feeds on grass and other vegetable substances. In their native state these animals are said to feed in herds of thirty or forty together; and one is generally observed to be stationed as if apparently on the watch, at a distance from the rest. One of the most remarkable peculiarities of the Kangaroo is the extraordinary faculty which it possesses of separating at pleasure, to a considerable distance, the two fore teeth in the lower jaw. The Kangaroo may be considered in some degree as naturalized in England, several having been kept for many years in the Royal domains at Richmond, which have during their residence there produced young, and promise to render this most elegant animal a permanent acquisition to our country.

6. The *Bush Kangaroo*. Not described by any writer.

7. and 8. *Kangaroo Rats* (Didelphis Tridactyla). This species, which from its colour and the general aspect of its upper parts, has obtained the title of the Kangaroo Rat; is about the size of a rabbit; the ge-

neral shape of the animal resembles that of the Kangaroo, but is far less elegant, the proportion of the parts less pleasing, and the hair, which is a dusky, cinerous brown, of a coarser nature. In its teeth it agrees with the great Kangaroo, except that it has eight instead of six front teeth in the upper jaw, the two middle ones being sharp-pointed: the fore teeth in the lower jaw are like those of the Kangaroo as to shape and position, but are smaller in proportion; the grinders are three in number on each side both above and below, the foremost being fluted or channelled with several longitudinal ribs; the two remaining ones plain. The structure of the hind feet in this species resembles those of the Kangaroo, but the fore feet have only four toes. The female is furnished with an abdominal pouch for the reception of the young. Some of this species were imported in a living state from New Holland, and brought forth young. Its native name is *Poto Roo*.

9. The *Porculine Opossum* (Didelphis Obesula).

10. *Spotted Opossum* (Didelphis Maculata).

11. and 12. *Flying Opossums* (Didelphis Volans).

These are natives of New Holland, and Dr. Shaw seems to speak of them as the most beautiful of quadrupeds. Their general appearance is that of a large Flying Squirrel, to which they are nearly allied.

12. A White Variety of the above.

13. *Squirrel Opossum* (Didelphis Sciurea).

Is a beautiful animal, greatly resembling the former, except in size.

14. *Zebra Opossum* (Didelphis Cynocephala).

This animal, which is the only one known in any

collection, is a native of Van Diemen's Land, where it inhabits among the caverns and rocks in the high and almost impenetrable glens of the mountainous parts of that country: it is the largest carniverous animal yet discovered in New Holland, measuring from the nose to the end of the tail five feet three inches; it is said to be extremely voracious, which will scarcely be doubted, when it is known that the one described in the ninth volume of the Linnæan Transactions, p. 179, had in its stomach the partly digested remains of the Porcupine Ant-eater; it is said to have a short gutteral cry, and appeared exceedingly inactive and stupid.

15. *Pigmy Opossum* (Didelphis Pygmæa).

This is the least of all the Opossums; is not larger than a common mouse: it is a native of New Holland.

WOMBAT.

The *Wombat* is a native of New Holland. A living one was brought to this country by Mr. Brown, librarian to the Linnæan Society, who went as a naturalist with Capt. Flinders, on his voyage of discovery; it lived in a domesticated state for two years in the possession of Everard Home, Esq. to whom, in a paper read to the Royal Society, June 23, 1808, we are indebted for the following observations:—"It

" burrowed in the ground whenever it had an oppor-
" tunity, and covered itself with earth with surprising
" quickness; it was quiet during the day, but con-
" stantly in motion in the night; was very sensible
" to cold; it eat all kinds of vegetables, but was
" particularly fond of new hay, which it ate stalk by
" stalk, taking it into its mouth like a Beaver, by
" small bits at a time; it was not wanting in intelli-
" gence, and appeared attached to those to whom it
" was accustomed, and who were kind to it; and
" when it saw them it would put its fore paw on the
" knee; when taken up, it would sleep in the lap: it
" allowed children to pull and carry it about, and
" when it bit them, did not appear to do it with
" anger or violence. It appeared to have arrived at
" its full growth, weighed about twenty pounds, and
" was about two feet two inches long."

The *Brazilian Porcupine* (Hystrix Prehensilis).

This very curious animal measures about two feet six inches in length, and is entirely covered, except the tip of the tail, with short, strong, and very sharp spines, of which the largest is about three inches; it inhabits woods, and climbs trees, in which it is assisted by its prehensile tail. They are inhabitants of the warmer parts of South America. Both the specimens in this Collection were kept some time alive in London. Their food was entirely of a vegetable nature, and their manner mild and inoffensive; their voices a weak, tremulous cry, somewhat resembling that of a young pig, but not so shrill or loud.

Near this is the *Canada Porcupine* (Hystrix Dorsata).

The spines of this are longer and sharper than the last, but owing to its being covered with long hair, are not visible but on close inspection; it sometimes

climbs trees, and is killed by the Indians of North America as an article of food; the beautiful ornamental works on their dresses and utensils are executed with the dyed quills of this animal.

CAVYS (CAVIA).

These are all natives of the warmer parts of America; they feed on vegetables, and either burrow in the ground or live in the hollows of trees.

1. and 2. *Spotted Cavys.* Burrow in the banks of rivers, having three outlets to each dwelling; are easily tamed, like the common Cavy or Guinea Pig; its flesh is much esteemed, and eaten by the Portuguese and Spaniards of America.

3. The *Long-nosed Cavy* (Cavia Aguti). Sometimes called the Java Hare. Is frequently imported into this country.

4. The *Rock Cavy* (Cavia Aperea).

5. and 6. *River Cavy* (C. Capybara). It is the largest of the Cavias, and the only one known to have been brought to this country; it lived two years in the possession of Mr. Kendrick, of Piccadilly; was extremely gentle, and fed on vegetables, though in a state of nature they are said to dive and catch fish with great dexterity. A singularity in the animal,

which has not been noticed by writers, is, that on the outside of each hind foot, it has a large, horny projection, four inches long and two broad, probably intended to assist it in swimming.

BEAVER.

The *Beaver* (Castor Fiber).

The Beaver is a native of the most northern parts of Europe, Asia, and America; in its natural state lives in well-regulated societies of from two to three hundred each, constructing their habitations of wood and clay in the most astonishing manner, with the greatest regularity; but when taken from their native haunts they are said, by all naturalists who have had an opportunity of observing them, to lose their instinct and become a stupid and sluggish animal. The following anecdote may, however, be relied on:—a pair of them was purchased a few years since by Mr. Polito, for the purpose of exhibiting in his Collection; they were put into an upper room or loft, with a quantity of green sticks and boughs for their food; on visiting them in the morning, only one could be discovered, which was lying in a state of evident uneasiness in a corner of the room: at last, after some search, the female was found to have died in the night, and the male had removed her to an

obscure part of the place, and covered her carefully over with wood, so that no part of her could be seen, and had then retired to the place where he was found.

MARMOT.

The *Marmot* (Arctomys Marmota).

The Marmot, when taken young, is more capable of being tamed than any other wild animal; it will easily learn to perform feats with a stick, to dance and obey the voice of its master; it bears a great antipathy to the dog, and when it becomes familiar in a house, and is certain of being supported by its master, it will in his presence attack the largest dogs, and boldly fasten on them with its teeth. They are natives of the Alps and Pyrenean mountains, and remain in a torpid state from the end of September to the beginning of April. They live in societies, from five to fourteen in number, in burrows which have several passages constructed with great art; the principal apartment at the end is warmly lined with moss and hay; and it is asserted that this work is carried on by the whole company; that some cut the finest grass, others pull it up, others take it in their turn to convey it to the hole; upon this occasion, it is added, one of them lies on its back, permits the hay to be heaped on its belly, keeping its paws upright

to make room, and in this manner is dragged, hay and all, to their common retreat. Whenever they venture abroad, one is placed as a centinel, sitting on an elevated rock, while the others amuse themselves in the fields below; and no sooner does he perceive a man, an eagle, a dog, or any other enemy, than he informs the rest by a kind of whistle, and is himself the last to take refuge in the cell. These animals run much swifter up hill than down; they climb trees, and run up the clefts of rocks with great ease: indeed it is ludicrously said of the Savoyards, who are the general chimney-sweepers of Paris, that they have learned their trade from the Marmot.

SQUIRRELS (SCIURUS).

These are a numerous and active race of animals, dispersed over most parts of the world; their food is wholly vegetable, of which they lay up stores for their winter provision.

1. The *Black Squirrel* (Sciurus Niger).

Inhabits North America, where it does much mischief to the maize plantations.

2. *Grey Squirrel* (Sciurus Cinerius).

This is also a native of America, and is so great a pest to the farmer, that very considerable sums have been paid for their destruction.

3. *Pair of Russian Squirrels.* A variety of S. Vulgaris.

4. *Palm Squirrel* (S. Palmarum).

Inhabits the hot parts of Africa and Asia: feeds principally on cocoa nuts.

5. & 6. *Ground Squirrel* (S. Striatus).

Native of the colder parts of America and Asia; burrows under ground, and has cheek pouches, with which it carries home its winter stock of provisions.

7. *Flying Squirrel* of America (S. Volucella).

Is less than the common European, being not above five inches long, and is of a grey ash colour on the back, and white on the under parts; he has black prominent eyes like a mouse, with a large broad flat tail. The name seems to imply that he is endowed with wings like a bat, which however is not the case; for he has only a loose skin on each side, extending from the fore to the hinder feet, with which it is connected; this skin he can stretch out like a sail, which holds so much air, that it buoys him up, by which means he can jump from one tree to another at a great distance, insomuch that some have thought he had the faculty of flying. He feeds on the same provisions as other squirrels, and may easily be made tame; but he is apt to do a great deal of mischief in corn fields, by cropping the corn as soon as it begins to ear.

8. & 9. An undescribed species from Senegal.

HARES (LEPUS).

1. *American Hare* (Lepus Americanus).

2. *American Hare,* just receiving its winter clothing, which in the northern part is entirely white.

3. *Hare* from Senegal, greatly resembling the common, but the hair much shorter and finer, and the animal of a less size than ours.

4. *Angora Rabbit* (Lepus Angorensis).

The *Lama* (Camelus Glama).

This is a native of the Peruvian mountains, and was the only beast of burthen known to the original inhabitants: it resembles the Camel in being able to abstain from drink for a considerable time, and travels about three German miles a-day, carrying a burthen of 150lb. This specimen is about six months old; bred in 1811, by I. Thorpe, Esq. of Chippenham Park, near Newmarket, and is the only one ever produced in this country.

The *Vicuna* (Camelus Vicuna).

This is another of the Peruvian animals, with

which, till lately, we have not been well acquainted. It inhabits the highest mountains of the Andes in flocks; is timid and gentle, but very swift: it carries small burthens, although it is not easily tamed; their wool is extremely fine; from it is manufactured cloths of the most exquisite softness and beauty, known by the name of Vigona Cloth. This specimen is the only one ever brought alive to this country; it was in the extensive Menagerie of Mr. S. Polito, to whose liberality in encouraging the importation of foreign animals the public are indebted for the knowledge of many interesting subjects before unknown.

The *Memina*, male and female (Moschus Memina).

These were received from Java; one of them lived some time in the Menagerie of her Royal Highness the Duchess of York, who presented it to the Museum. The other was presented by her Royal Highness the Princess Charlotte of Wales.

The *Stag* (Cervus Elephus).

A remarkable fine specimen of this noble animal; presented by the Earl of Derby, in whose park at Knowsley it led the herd for several years.

CAMELOPARDALIS (GIRAFFA).

The Camelopardalis, or Giraffa *(Camelopardalis Giraffa)* which is by far the tallest of all known quadrupeds, measuring the extraordinary height of seventeen feet three inches from the hoof of the fore foot to the top of the head, whilst (so disproportionate is the form) that the body scarcely exceeds that of a horse. Till lately the existence of so wonderful an animal was doubted by many European Naturalists, who ranked it amongst the fabulous monsters of antiquity.

This specimen was lately killed at a considerable distance, in the interior of the Cape of Good Hope, by the Rev. Mr Edwards, an African Missionary, now travelling in that country, under the patronage of Lord Caledon, the Governor of the Cape. It is represented as an harmless, timid animal, living in small herds of six or seven together, in the plains that border on Caffraria: they are so extremely shy and wary, that it is with the greatest difficulty they can be approached: they feed on the fruit of the wild apricot, and on the tender branches of several species of Mimosa. This specimen, which is a full grown male, and very rich in colour, is allowed to be the finest ever brought to Europe, and is in the most perfect preservation.

Such is the excessive rarity of this singular animal, that from the decline of the Roman Empire till the middle of the eighteenth century its existence was deemed extremely problematical, if not in the highest degree chimerical. The contradictory accounts of Oppian, Heliodorus, and Strabo, at periods when

curiosity might have been amply gratified, and investigation have received the fullest and most satisfactory conviction, by attending the public games (upon which occasions, Pliny informs us, it was frequently exhibited), were alone sufficient to create justifiable doubts, and propagate an opinion of the inaccuracy of the statements and inadvertency of these writers upon the subject. The narratives of succeeding travellers, who felt little inclination to observe, or whose opportunities of observation were limited and few, only tended to increase this perplexity, already too intricate, and by their dark, ambiguous details, equally opposite and vague, to confirm the previous supposition of its fabulous and imaginary origin.

That this conjecture should have been strengthened by a perusal of the several relations of our travellers and naturalists, ought not to excite surprise, when we remember we are told, by one, that the length of its fore-legs is double that of those behind—by another, that this disparity does not exist—by a third, that such is their astonishing length, that a man mounted on horseback may with ease pass beneath its body,—and by a fourth, that in point of magnitude, it does not exceed the size of a small horse.

From such a contrariety of evidence, the veracity of the traveller became disputed, and the credulity of the naturalist an object of derision. The whole was rejected as a fictitious invention—was classed with the crude abortions of Pliny's fervid imagination; and such was the influence of this variety of testimony, that though Capt. Carteret had given a distinct account of a Giraffe killed at the Cape of Good Hope in the year 1769, Mr. Pennant still refused to yield his assent, till convinced by personal inspection of a skin preserved in the University of Leyden. The cloud of uncertainty, however, which has so long hovered

over the real form of this beautiful and extraordinary animal, has of late years been dissipated by the minute descriptions of Gordon, Vaillant, and Sparrman. From them we have learned its size, its proportions, and peculiarities, with an accuracy and fidelity both laudable and decisive. Yet, whilst we are fully acquainted with the external qualities of the Giraffa, it is to be lamented we know so little of its habits. An extreme docility, and remarkable passiveness of disposition, form the prominent features of its character. Antonius Constantius, a writer of the fifteenth century, and one of the earliest of modern travellers who has noticed it, mentions one which he saw led through the streets of Fano, so gentle and quiescent in its conduct, that the children of the town brought bread and fruit, which it patiently ate from their hands, and received the gratuitous offerings of the spectators at their windows as it passed. Mr. Gordon also records an anecdote of the Giraffa slain by himself, which represents it in a truly amiable and interesting light. Having wounded it with a musket-ball, it suffered him to approach it as it lay upon the ground, without offering to strike with its horns, or shewing any inclination to revenge itself. He even stroked it over the eyes several times, which it only closed without evincing any signs of resentment. When its throat was cut, for the purpose of procuring the skin, and whilst lying in the agonies of death, it struck the earth with its feet, with a degree of violence and force far exceeding that of any other animal. In these, Mr. Vaillant informs us, lay his only means of defence; yet such is the rapidity with which he is enabled to exert them, that the succession of their movements almost escapes perception; and so powerful are the blows inflicted, that they are sufficient to repel the attacks of the

Lion, though of little avail against the fury and impetuosity of the Tiger.

Its general food consists of the leaves of a species of Mimosa, called by the natives, *kanaap*, and by the planters, *kamel-doorn;* though when grass is to be obtained (which from the scarcity of pasture in the southern provinces of Africa is but seldom) in common with other horned cattle, it joyfully partakes of such a repast. An erroneous opinion, however, has been promulgated, that when feeding upon shrubs and herbage, it is compelled to extend its legs to a considerable distance, in order to bring its mouth in contact with the earth. This, Mr. Vaillant, who has been peculiarly explicit upon the subject, contradicts, from his own experience and observation both whilst grazing and drinking, and pertinently remarks, that if we will compare the length of the neck with that of the legs and body, we shall discover there is no necessity for this unnatural assistance. This testimony is also confirmed by the representation given of the Giraffa in the beautiful Prænestine pavement of Sylla, where we observe it delineated amidst a herd of African quadrupeds, browsing in the customary posture of other beasts.

ANTELOPES (ANTILOPE).

1. The *Blue Antelope* (Antilope Leucophœa), was received from Senegal; is also found at the Cape of Good Hope.

2. *Corrine Antelope* (Antilope Corrina).

3. Female of the above.

4. The *Harnessed Antelope* (Antilope Scripta).
A most beautiful species found near the Senegal river. Presented by his Royal Highness the Duke of York.

5. *Pigmy Antelope* (Antelope Pygmæa).
This beautiful and diminutive species is only nine inches high. It inhabits the hotter parts of Africa, and is said, by authors, to be capable of leaping a wall twelve feet high; it is easily tamed, but is so tender as not to survive a removal from its native clime.

The *Broad-tailed Sheep.* A curious African species, sent by the Dey of Algiers to the Earl of Liverpool, who presented it to the Museum.

The *Zebra* (Equus Zebra). This extremely beautiful animal is a native of the hotter parts of Africa, and is frequently seen in herds in the neigh-

1, Common Seal . 2, Young of the Rough Seal . 3, Patagonian Penguins

Pub. by W. Bullock, London Museum Piccadilly April 1812.

bourhood of the Cape of Good Hope; they are however so extremely wild and cautious as rarely to be taken, and are of a disposition so vicious and untameable as seldom to submit to the bridle, even when taken young. In size, the Zebra is superior to the Ass; in its colour it is much more elegant: the ground is white or cream colour, and the whole animal is decorated with very numerous black or dark brown stripes, disposed with the utmost symmetry in a manner not easily to be described.

The *Pecari*, or *Mexican Hog* (Sus Tajasu).

Inhabits the warm parts of America, feeding on vegetables and reptiles: is said to attack and devour the Rattle Snake with impunity.

On a Rock, near the Sea View, are placed the

SEALS.

The *Common Seal* (Phoca Vitulina).

This animal is a native of the European Seas, and is found about all the coasts of the Northern hemisphere, and even as far as the opposite one, being seen in vast numbers about the southern polar regions. We are informed by Mr. Pennant, that it also inhabits some fresh-water lakes, as that of Baikal, Aral, &c. Seals may often be observed sleeping on the rocks

near the coast; but when approached too near, they suddenly precipitate themselves into the water.—Sometimes they sleep sound; and it is affirmed by some, that the Seal sleeps more profoundly than most other quadrupeds. The structure of the Seal is so singular, that, as Buffon well observes, it was a kind of model on which the imagination of the Poets formed their Tritons, Sirens, and Sea-gods, with a human head, the body of a quadruped, and the tail of a fish. The Seal is possessed of a considerable degree of intelligence, and may be tamed, so as to become familiar. The female Seals produce their young in the winter season, and seldom bring more than two at a birth. It is said, that they suckle their young ones for about the space of a fortnight on the spot where they are born, after which they take them out to sea, and instruct them in swimming and seeking their food, which consists of fish, sea-weeds, &c.

Falkland-Isle Seal (Phoca Australis).

Remarkable for the structure of the hind-feet, the webs of which extend far beyond the claws, which in the fore feet are wanting.

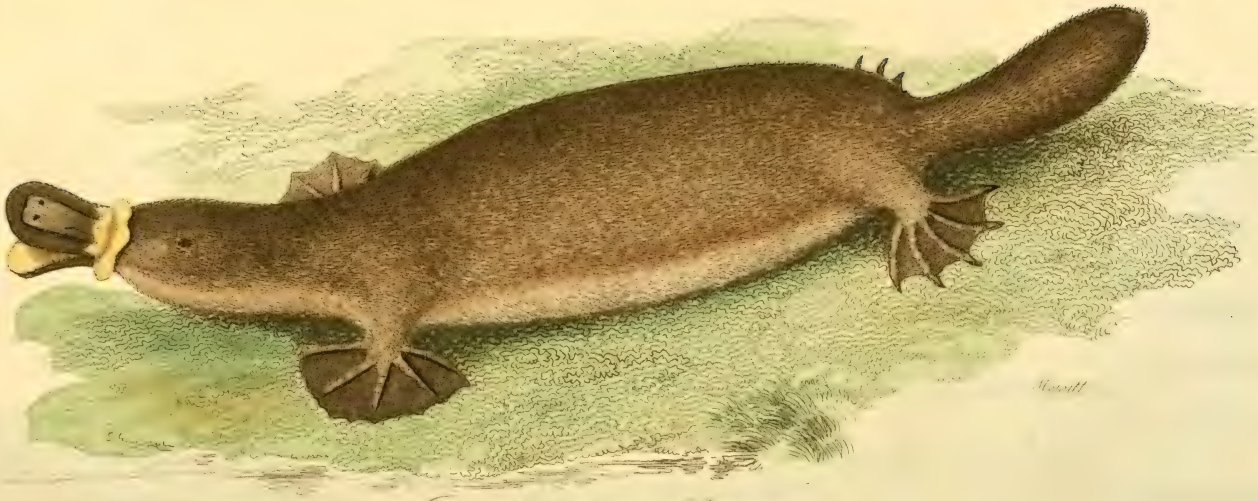
A small *Seal,* from Davis's Straits, supposed to be *Phoca Pucilla.*

Near this, on the right hand side, is seen, as descending from a rock, the *White,* or *Greenland Bear* (Ursus Maritimus).

This is a far larger species than the common Bear, and is said to have been sometimes found of the length of twelve feet. The head and neck are of a more lengthened form than in the common Bear, and the body itself is longer in proportion. The whole animal is white, the ears are round and small,

Faulkland Island Seal.

Pub. by W. Bullock London Museum Piccadilly April 1812.



Duck billed Platypus.

Pub. by W. Bullock, London Museum Piccadilly April 1.1812.

the eyes little, and the teeth of extraordinary magnitude; the hair is of great length, and the limbs are extremely large and strong. It seems confined to the coldest part of the globe, being found within eighty degrees of north latitude, as far as any navigators have yet penetrated. The shores of Hudson's Bay, Greenland, and Spitsbergen, are its principal places of residence; but it is said to be carried sometimes on the floating ice as far south as Newfoundland.—The Polar Bear is an animal of tremendous strength and fierceness. Barentz, in his voyage in search of a North-east passage to China, had proofs of the ferocity of these animals, in the Island of Nova Zembla, where they attacked the seamen, seizing them in their mouths, carrying them off with the greatest ease, and devouring them in the sight of their comrades. It is said that they sometimes will attempt to board armed vessels at a distance from shore, and have been repelled with difficulty. Presented by S. Staniforth, Esq. of Liverpool.

On one of the Basalt Columns near the Sea, is the *Platypus* (Platypus Anatinus).

Of all the quadrupeds yet known, this seems the most extraordinary, exhibiting the perfect resemblance of the beak of a duck engrafted on the head of a quadruped; so great was the resemblance, that Dr. Shaw, who published the first account of it, could scarcely refrain from thinking it a deception; but we are since become acquainted with the animal and its habits. It is a native of New Holland, and is found in fresh water lakes in the neighbourhood of Port Jackson, in the muddy banks of which it procures its food. Governor Hunter observed a native spear one with great dexterity; but it used its sharp claws with such strength, that it was necessary to confine it between two boards in order to extract the

barb, when it ran off with greater speed than from the structure of the fore feet it seemed capable of doing on the land.

Near the Zebra is, perhaps, the largest specimen of the *Land Tortoise* ever brought into this country, the shell alone measuring 3 feet 2 inches in length, and near 6 feet in circumference; it is the *Testuda Indica* of Linnæus.

Twisted round the Trunk of the Large Tree behind the Zebra, is a specimen of the *Great Serpent of Surinam*; and on the ground, with its head erect, near the window opposite the Stag, is another from the Brazils; presented by his Royal Highness the Duke of York: they are near 20 feet long, and are of the kind that has usually been called the Boa Constrictor, but they belong to the Genus Coluber.

On the Rocks, near the commencement on the Land Side, is the *Coryphene,* or *Dolphin*—see Companion of the Museum, p. 106.

The *Torpedo Ray* (Raja Torpedo).

Frog Fish (Lophius Europæus).

Young Shark—see Companion to the Museum, p. 114.

Porcupine Fish—see as above, p. 108.

Near these are a pair of those immense Shells, the *Chama Gigas of Linnæus.* They are the largest of all known shell fish, being 3 feet across, and weighing upwards of 300lb. This is the Cockle mentioned by voyagers as capable of dining a whole ship's company. The fish is said to weigh 40lb.: it is black, but not ill-tasted, and is generally cut into steaks and broiled.

BOTANICAL SUBJECTS

IN THE

PANTHERION.

THROUGH the windows on the left side of the entrance is a fine specimen of *Citrus Aurantium*, the Seville Orange.

On entering the room on the same side, forming the division of the first and second windows, is *Atrocarpus Incisi*, the Bread-fruit Tree.

The fruit of this tree the inhabitants of the Ladrone, Phillipine, and most of the islands in the South Seas, use as bread. *Dampier* says, "that in "Guam, one of the Ladrone islands, there is a cer- "tain fruit called the Bread-fruit, growing on a "tree as big as our large apple-tree, with dark leaves. "The fruit is round, and grows on the boughs like "apples, of the bigness of a good penny-loaf: "when ripe it turns yellow, soft and sweet; but the "natives take it green and bake it in an oven till the "rind is black; this they scrape off, and eat the inside,

" which is soft and white like the inside of new
" baked bread, having neither seed nor stone; but,
" if kept longer than twenty-four hours, it is harsh.
" This fruit is in season eight months in the year,
" and the natives feed on no other sort of bread du-
" ring that time."

Somewhat to the right of the foregoing, at a distance from the window, is *Agave Americana*, American Aloe, in bloom.

The next division of the windows is formed by *Citrus* —— the Five-fingered Lemon, or Citron, an agreeable acid fruit, which is used by the inhabitants of hot climates for the same purposes as the Common Lemon.

Fronting the third window, is *Musa Sapientum*, the Banana. This plant is to the inhabitants of the West India Islands, what the Bread-fruit Tree is to the countries where it is indigenous, the staple article of food: the fruit is so essential to the natives of tropical climes, that they never go to a distance without taking a quantity of it with them. When " the West Indians undertake a voyage, they make " a provision of paste of Banana, which in case of " need serves them for nourishment and drink; for " this purpose they take ripe Bananas, and, having " squeezed them through a fine sieve, form the solid " fruit into loaves, which are dried in the sun or in " hot ashes, after being previously wrapped up in " the leaves of the Indian Flowering Reed."

When they make use of this paste they dissolve it in Water, which is very easily done, and the liquor, thereby rendered thick, has an agreeable acid taste imparted to it, which makes it both refreshing and nourishing.

Twining round the stem of the Banana, is *Passiflora Quadrangularis*, the Square-stalked Passion Flower. This is the only species producing an eduble fruit, which in the West Indies is known by the name of Granadilla.

The stem dividing the third and fourth windows, is the *Annona Reticularis*, Custard Apple. This, with two other species, are frequently confounded under the appellation of sweet and sour sop.

Placed between the Rhinoceros and Elephant, is *Dimocarpus Litchi*, which produces a beautiful strawberry-like fruit.

At a short distance to the right, is a variety known by the name of *Mandarin Orange;* when ripe it has a peculiar fine flavour, and has the appearance of being double.

Trained on the fourth window is a curious variety of Peach, which is cultivated in China, on account of its luscious fruit.

Trailing on the Rocks over the Den of the Lion, is the *Bottle Gourd*, a native of the West Indies.

Projecting as from the back of the room, are seen the Fruit of *Addinsonia Digitata*, the Boabad. This is one of the largest of the vegetable tribe, being (as we are informed) sometimes found exceeding seventy feet in circumference ; the leaves as well as fruit are used by the negroes for food: the latter they dry and then pound ; after which, they mix the powder with their drink, which in some measure allays the violent perspirations that frequently prove dangerous in hot climates.

From the centre division is seen a fruit known to the Chinese by the name of *Date.*

The two centre window frames and division are formed of a branch of *Quercus Suber,* the Cork Tree.

In the adjoining window, is a small branch of *Passiflora Alata,* the Winged-stalked Passion Flower.

Nearly opposite the centre of the same window, is *Carica Papaya,* the Papaw Tree, with its fruit in different stages of maturity.

The division of the next window, is *Psidium Pyriferum,* the Guava, or Bay-Plum, a fruit frequently imported into this country in the form of jelly, from the West Indies.

In the back ground, to the right of the Papaw, is *Borassus Flabelliformis,* the Palmira, Fan, or Malabar Palm. From this plant the natives of India obtain a very agreeable liquor susceptible of vinous fermentation, from which they either distil a spirit, or by evaporation obtain sugar. The leaves of this and other species are used by the inhabitants of Asia and Ceylon as paper, requiring no other preparation than to be separated and cut smooth with a knife; they are written upon while fresh with a steel, or stylus ; the characters thus traced are rubbed over with charcoal or other black substance, which gives them the distinctness of engravings. The wood of this tree is of a dark colour, elegantly veined with yellow, and is used for buildings and domestic purposes. The leaves are also used for umbrellas, one of which Thunberg asserts, " is sufficiently large to shelter six " persons from rain."

In front of the last, is *Urania Speciosa,* an interesting and highly curious plant, nearly approaching in external appearance the *Strelitzia* and *Heleconia.*

Behind this, towards the corner, is *Pandannus Odoratissimus*, the Nicobar Bread-fruit. This, though of so tempting an appearance, is but very indifferent food, and is but seldom eaten but in cases of necessity.

Behind the Pandannus, is *Citrus Decumana*, the Shaddock, the fruit of which was cast from recently imported specimens.

At a few paces to the right, is *Cocus Nucefera*, the Cocoa-nut Tree. This well known tree rises to the height of sixty feet; is crowned with a bunch of ten or twelve leaves, each leaf being from ten to fifteen feet in length, and composed of a double range of flag-shaped leaflets: the cocoa is of slow growth; but, to compensate for this, it lives long, and regularly bears fruit three or four times in the year. In Ceylon, it is a common practice to make an incision in the flower sheath, from whence issues a white sweet liquor, of a pleasant flavour, which the natives call *Toddy*. This distils from the wound, and is received in earthen pots or chatties, which are suspended from the branches.

It is a wholesome and cooling drink, while fresh, but this is not long, as it contains a quantity of sugar, and of course, in the warm climate of Ceylon, it soon ferments; in the space of twenty-four hours it becomes acid, and after a time proves intoxicating. The fruit of this tree is the Cocoa Nut, so generally known in this country; when half ripe, it contains a quantity of clear water, better known by the name of milk; this has a pleasant smell and most agreeable taste: in countries where the heat is intense, and the ground frequently parched for want of moisture, the milk of this nut proves, from its coolness, a delightful and refreshing beverage.

Every part of this tree is destined for the service of man: of the rind of the nut the natives make their cordage and nets; of a light, loose substance that grows among the branches, cloth of various kinds, and for various purposes, is manufactured; the branches and stems are used in buildings and for domestic purposes, while the leaves are employed to cover the roofs and repel rain: these last are also made into mats, baskets, and other domestic utensils.

Embracing the stem of the Cocoa, is a beautiful variegated species of *Gourd*, cast from a specimen raised in this country.

Fronting the last window on this side, is a beautiful and high-flavoured, though diminutive, species of *Orange*, modelled from a drawing in the possession of Sir Joseph Banks, whose unbounded liberality in forwarding scientific enquiry, the proprietor of this Establishment has gratefully to acknowledge—as, from Sir Joseph's personal directions, the use of his library and valuable collection of fruit, the principal part of these curious exotic vegetables were modelled.

On the stem, dividing the two last windows, is *Mangifera Domestica* (the Mango), the fruit of which is well known in this country as a pickle.

Fronting the Cameleopard, is *Areca Catechu* (the Betel Tree), whose fruit is in this country known by the name of Betel Nut (and used here as a dentifrice); it grows in clusters at the top of the stem, in the manner of the cocoa; they are about the size of a hen's egg, and the natives chew them in the same manner as tobacco is used in this and other countries.

The nuts are prepared by first cutting them in

slices, and sprinkling them with slacked lime, and then wrapping them in leaves of some species of pepper, which they masticate with the nut. The wood is used in building the habitations of the natives. In America, the trunks of the trees are used as water pipes, for which purpose they are admirably adapted, from the hardness and durability of the wood.

The *Passion Flower*, climbing the tree, is of the same species as the one already described with the Bannana.

Continuing to the right, is *Thea Virides* (the Green Tea Plant) which is now pretty generally cultivated in most conservatories and green-houses in this kingdom.

Growing from behind the trunk of the large tree in the corner, is the *Mimosa Scandens*, Climbing Mimosa. The immense pods or seed vessels are hanging pendant from a small branch; in one of the small windows fronting the sea view, a pod is placed, which serves to shew the exact form: it is not a large specimen, as they are frequently met with full four feet in length.

From the last-mentioned window is seen, *Rhizophora Gymnorhiza* the Mangrove or Oyster Tree. This is a native of the East Indies, where it attains the height of ten or twelve feet; it affects moist situations, generally within the influx of the sea, where the tide can wash its stem. There is something exceedingly curious in the manner which nature has chosen to conduct the seed of the Mangrove to the earth; it is a remarkable deviation from the general rule, and is simply thus:—The fruit produces a single seed, inclosed in an oblong capsule, which, when ripe, begins to germinate without falling from the tree. A little radicle makes its appearance from

the top of the capsule, from whence it proceeds in the form of a ligneous fibre, till it is more than a foot long; in this state the seed hangs pendant, till by its weight, added to the continual occilations to which it is subject from the slightest breath of air, it is disengaged from the capsule and falls to the ground. The process which follows is common to other seeds.

The seeds are said to fall so as to rest in a vertical position; this may easily happen where the ground is continually moist and soft enough to receive any impression, which is constantly the case where these trees are found.

In China, the bark is employed to strike a black dye; it emits a very strong sulphurous exhalation and the wood, which has the same odour, burns very briskly and with a dazzling flame.

In consequence of the Mangrove growing as it were in the water, it becomes the resort of fishes, particularly oysters; the last deposits its spawn upon the stems and branches, which in time become loaded with them; and the oysters gathered from such situations may readily be known by pieces of the wood, which are generally attached to the shells.

From the circumstances above related, the tree has taken the common appellation of Oyster Tree.

Rising on two green stems, are the heads or flowers of *Cyperus Papyrus*, the Papyrus. They are placed rather to the left of the Mangrove.

From this plant the ancient Egyptians formed their books or papers. For this purpose, the thick part of the stalk was cut in two; the pellicle between the pith and the bark, or perhaps the two pellicles, were stript off and divided by an iron instrument, which was probably sharp pointed, but did not cut at the edges. This was squared at the sides, so as to be

like a ribband, then laid upon a smooth table, after being cut the length the leaf required.

The Egyptians applied the Papyrus to several purposes, independent of the manufacture of paper. The roots sometimes served them for fire-wood, and were formed into different domestic utensils. Of the stems, interlaced together, they constructed a kind of boat; and of the interior bark, they made their sails, mats, clothes, cordage, and coverlids of their beds.

The boats made of Papyrus resembled great baskets, compactly woven together, and plaistered with some resinous substance. It was probably in a vessel of this kind that Moses was exposed, when he was found by the daughter of Pharaoh, on the banks of the Nile.

[For the above and other interesting accounts of the Botanical subjects in this Exhibition, we are indebted to Wood's Zoography.]

END OF THE PANTHERION.

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"Find tongues in trees, books in the running brooks,
"Sermons in stones, and good in every thing."

SHAKESPEARE.

LONDON:

PRINTED FOR LACKINGTON, ALLEN, AND CO. TEMPLE OF THE MUSES, FINSBURY-SQUARE.

Man, always curious and inquisitive, and ever desirous of adding to his useful knowledge, among other sources of amusement and instruction, is naturally led to contemplate and to inquire into the works of Nature. He looks with grateful reverence upon those vast families of created beings, which it has pleased the Author of all things to place subordinate to his wisdom and power: he examines, with wonder, their formation, habits, and economy; and hears, with delight, the narrations of those who have sought after the Natural Curiosities of distant countries.

That this beautiful and inviting study may be facilitated, and that the whole of the productions and inhabitants of this our globe may be arranged and conveniently exhibited, systems have been invented, reducing them to their several kingdoms, classes, tribes, families, and individuals; with their names, habitations, manners, economy, and appearance. These have enjoyed their various degrees of repute and excellence; but the amazing comprehension, learning, and labour, of the celebrated Sir Charles Linné, has produced a system so clear and simple, so compendious and accurate, that the lover of Natural History may directly discover the name and properties of whatever subject may fall in his way, or he may choose to investigate.

In systematic arrangement, the student has this peculiar advantage, that by immediately arriving at the name, the whole of its known qualities are at once displayed to him; but without a systematic classification, he wanders in obscurity and uncertainty, and must collect the whole of its habits and peculiarities before he can ascertain the individual he is examining.

The traveller, for example, who wishes to collect the more curious subjects of Natural History, finds a bird, whose name, habits, and economy, he is desirous of investigating; from its conic, sharp-pointed bill, slender legs, and divided toes, he finds that it belongs to the order Passeres; and from its thick, strong, convex-bill, with the lower mandible bent in at the edges, and the tongue abruptly cut off at the end, he refers it to the genus Loxia, or Grosbeak; and running his eye over the specific differences, he immediately determines it, from its exactly answering to the specific character, "Body above, brown; beneath, yellowish-white; crown and breast, pale yellow; chin, brown; to be the Phillippine Grosbeak (*Loxia Phillippina)* a little bird which he finds is a native of the Phillippine Islands, and endowed by nature with instinctive notions of preservation and comfort, nearly approaching to human intelligence; that it constructs a curious nest with the long fibres of plants, or dry grass, and suspends it by a kind of cord, nearly half an ell long, from the end of a slender branch of a tree, that it may be inaccessible to snakes, and safe from the prying intrusion of the numerous monkies which inhabit those regions; at the end of this cord is a gourd-shaped nest, divided into three apartments, the first of which is occupied by the male, the second by the female, and the third containing the young; and in the first apartment, where the male keeps watch while the female is hatching, is placed, on one side, a little tough clay, and on the top of this clay is fixed a glow-worm, to afford its inhabitants light in the night-time.

The angler catches a fish, and from the singularity of its appearance is desirous to ascertain its place in the Science of Ichthyology, its name and habits; by its "broad pectoral fins, which more or less resemble the feet of quadrupeds," he finds it belongs

to the genus Lophius; and by its "depressed body, and rounded head," he discovers it to be the Common Angler, or Fishing Frog *(Lophius Piscatorius)*, a heavy, sluggish animal, that swims with difficulty, lurks behind sand-hills and heaps of stones, and throws over the long slender appendages resembling worms, or baits, with which its head is furnished, in order to entice the little fish to play round them, till they come within its reach to devour them.

That the English student may be put in possession of this vast treasure, comprehending and illustrating all Nature through the three kingdoms of Animals, Vegetables, and Minerals; a translation from the last edition of the Systema Naturæ of *Linné*, by *Gmelin*, amended and enlarged by the improvements and editions of later Naturalists, is now undertaken at great labour and expence.

The expediency of this translation has long been acknowledged, and the want of it often lamented; and it shall be a principal view of the Editor to deliver it in as intelligible and as useful a form as the nature of such a work will admit. The Linnæan terms will be rendered as nearly as possible to the idiom of the English language; and a general Explanatory Dictionary of such as are peculiarly appropriate to the Science will be affixed to the last volume, which will also contain a biographical account, and a fine portrait of the author. The work will be accompanied by such copper-plates as are properly introductory to the several departments of Birds, Fishes, Insects, Botany, &c. And for the conveniency of such as wish to become acquainted with the productions of their own country, the different subjects of Natural History, hitherto found in Great Britain, will be pointed out by an asterisk. It will be printed nearly in the same form as *Withering's* Bo-

tanical Arrangements, and will make seven large octavo volumes.

"He that enlarges his curiosity after the works of Nature," says a celebrated writer, "demonstrably multiplies the inlets to happiness. A man that has formed a habit of turning every new object to his entertainment, finds in these productions an inexhaustible stock of materials upon which he can employ himself without temptation to envy or malevolence; faults, perhaps, seldom entirely avoided by those whose judgment is much exercised upon the works of art. He has always a certain prospect of discovering new reasons for adoring the Sovereign Author of the Universe, and probable hopes of making some discovery of benefit to others, or of profit to himself."

The traveller who has leisure and inclination to be acquainted with this charming Science, who may find it necessary to determine what animals are fit for food, and what are poisonous, or who may wish to add whatever new materials may occur to him; the collector of such subjects as are valuable either for their beauty or their rarity, and who may wish to arrange his cabinet according to the laws of Nature and Science; and the retired and private individual, who may desire to fill his vacant hours with a natural knowledge of the various objects around him, must, except they be well acquainted with the Latin Language, and the technical terms peculiar to the Science, be for ever ignorant of the means by which this information may be best obtained.

Had Natural History been more scientifically known, *Milton* would not have described the Whale as a scaly animal, nor the Snake as having a hairy mane: nor would the arms of many of our nobility have been supported by the representations of com-

pound animals, existing only in the wild imagination of fanciful dreamers.

The advancement of Agriculture, and most of our arts and manufactures, must depend in no small measure upon our comparative knowledge of Natural History, particularly Chemistry and Botany; and these will doubtless become enlarged as this Science is more studied, and more known.

The Editor therefore hopes, that in delivering this work in the English Language, he is adding something to the stock of innocent amusement, and something to general utility.

A Companion

TO

MR. BULLOCK'S

LONDON MUSEUM.

The Number at the Corner of each Case refers to the Page of this Catalogue, in which it is described.

SANDWICH ISLANDS.—Case. †

Letter A.—A superb *Cloak*, made of the black feathers of the Powhee bird, ornamented with a broad checquered border of red and yellow. This Cloak is so long, as to touch the feet of the wearer, and is considered of the greatest value. It is worn by none except the chiefs, and by them only on particular occasions; as they never appeared in them but three times during Captain Cook's stay at Owyhee, viz. at

† Several of the articles in this Case were once the property of the celebrated Captain Cook.

the procession of the king and his people to the ships, on their first arrival; in the tumult when the unfortunate commander fell a victim to their fury and mistaken resentment; and when two of the chiefs brought *his bones* to Captain Clarke.

B.—Red-feathered *Cloak*, decorated with yellow, from ditto. The ground of these elegant and singularly beautiful cloaks is net-work wrought by the hand, upon which the feathers are so closely fixed, that the surface resembles the thickest and richest velvet, both in delicate softness and glossy appearance.

C.—A *Helmet*, composed of wicker-work, covered with red feathers.

D.—Another *Helmet* of a different construction, covered with black feathers. These helmets, with the dresses, form the principal riches of the chiefs of the South Sea Islands.

E.—A large *Hat*, made of red, yellow, and black feathers; remarkable for its resemblance in form to those of Europe.

F.—Two *Neck Ornaments*, made of different coloured feathers, from the Sandwich Islands.

G.—*Breast Plate*, or *Gorget*, from Otaheite, made of wicker, covered with feathers, and ornamented with rows of shark's teeth.

H.—Small *Idol*, of black wood, from ditto.

I.—*War Club*, from the Sandwich Islands. This club, which belonged to a chief of Owyhee, is armed with a very hard, sharp, polished stone, which makes it somewhat like a battle-axe; the other end is pointed, for the purpose of a pahoo or dagger.

K.—A *Basket*, from the Friendly Islands.—That the untutored Indians of the South Seas exceed the

artists of every civilized nation in this kind of work, the above basket is a proof; for it is of so close a texture, as to hold any liquid. It was used by the gentleman (who brought it from the South Seas, and presented it to this Museum) as a punch bowl.

L.—*Fish Hook*, from the N. W. coast of America.

M.—A *Necklace*, made of the teeth of the Peccary.

N.—*Head Ornament*, made of mother-o'-pearl and tortoiseshell. New Caledonia.

O.—A beautiful *Fly-flap*, purchased at the sale of the late Leverian Museum. In the first part of the Reference Catalogue to this once celebrated repository of curiosities, an account is given, in a note, of the manner in which it came into the possession of Mr. Samwell, the late surgeon of the ship Discovery, who published a Narrative of the Death of Capt. Cook; he informs us he brought this Fly-flap home with him, of which he gives the following account:—"The "natives of the Sandwich Islands always endeavour "to carry off the dead bodies of their friends slain "in battle, even at the hazard of their own lives. "This custom is probably owing to the barbarity "with which they treat the body of an enemy, and "the trophies they make of his bones; a remarkable "instance of which I met with at Atowai. Tomataherei, the queen of that island, one day paid us "a visit on board the Discovery, accompanied by "her husband, Taeoh, and one of her daughters by "a former husband, whose name was Oteeha. The "young princess, who was called Orereemo-horanee, "carried in her hand a very elegant Fly-flap, of a "curious construction. The upper part of it was "variegated with alternate rings of tortoiseshell and

" human bone; and the handle, which was polished,
" consisted of the greater part of the *os humeri* (bone
" of the upper arm) of a chief, called Mahowra;
" he had belonged to the neighbouring island of Oa-
" hoo; and in an hostile descent he made upon this
" coast had been killed by Oteeha, who was then
" king of Otowai. His bones were in this manner
" carried about by Orereemo-horanee, as trophies of
" her father's victory. The mother and daughter set
" a great value upon it, and were not willing to part
" with it for any of our iron; but Tomataherei hap-
" pening to cast her eye upon a wash-hand basin of
" mine, which was of queen's ware, it struck her
" fancy, and she offered to exchange. I accepted
" of her proposal, and the bones of the unfortunate
" Mahowra came at last into my possession."

P.—An *Under Garment*, made of the bark of the Touta or Cloth-tree, curiously decorated, from the Sandwich Islands; presented by the Rev. Doctor Clarke.

Q. and R.—*Two Caps* from Africa; one made of grass, which, for fineness of workmanship and regularity of pattern, exceeds any thing of the kind of European manufacture. What must appear wonderful in this work of art is, that it is knit with wooden sticks after the manner of stockings.

The one marked R, was presented by Captain Campbell, and is made of the fibres of bark.

In the other Case of South Sea articles is the upper part of the Chief Mourner's Dress of Ceremony at the Funerals of Otaheite. The part worn over the face is of large plates of mother-o'-pearl shell fastened together with fibres of the cocoa nut; opposite the right eye is a hole for the purpose of seeing through; the edges of the face-plates are bordered with the long tail-feather of the tropic bird, and

make an elegant appearance ; across the breast is stretched a most elaborate drapery, composed of several thousand pieces of mother-o'-pearl, each separately drilled and fastened together in a manner that would be found difficult for an European artist to copy, even with the advantage of iron tools, which were totally unknown to these islanders.

This very interesting article was (with many other valuable curiosities) presented to the Museum by Sir Joseph Banks, whose liberality and patronage of every thing connected with the promotion and diffusion of knowledge and science, are too well known to be noticed here.

In the same Case are two of the monstrous and uncouth Idols, made by the natives of these islands. The ground is of wicker, worked into a rude and enormous representation of the human head. They are covered with red feathers, and the mouth (near a foot long) is thickly set with teeth of the seal. The eyes are composed of pieces of mother-o'-pearl, with a round knob of black wood in the centre, and the head of one of them is rendered more terrific by being *adorned* by a large quantity of the snaky tresses of the natives.

A fine *Feather Helmet* and *Cloak* from the Sandwich Islands, presented to the Museum by the Rev. Dr. Clarke ; and an extremely curious pair of *Bracelets,* made of boar's teeth, presented by Mr. G. Humphrey.

On the Rail of the Gallery are hung a number of the weapons, &c. of the South Sea Islanders, among which are—

Tabooing Rods, or *Wands.* One of them is made of a beautiful close-grained red wood, and is pointed ;

on the other is the head of the Eatooa, or God, finely carved. These wands are carried by the priests, and sometimes by another person particularly appointed to that office, who is called Tonata (or the Taboo Man). They are made use of on various occasions, both public and private, and any thing touched by them is considered as prohibited or forbidden. The word Taboo, used emphatically to denote any thing sacred, eminent, or devoted. When a particular space of ground is *tabooed*, several of these rods or wands, tufted with dog's hair, are fixed up, and until they are removed, no person will presume to tread on that ground. Otaheite.

Different kinds of long *War Clubs* used in the Friendly Islands. These are made of wood, equal in hardness to the Brazilian, and superior in beauty to mahogany; and when it is remembered that iron and steel are wholly unknown to these people, few specimens, for laborious and skilful workmanship, can vie with them. The carving, though executed with no other instrument than a shell, a shark's tooth, or a flint, by dint of industry and ingenuity is perfectly uniform in pattern, and highly ornamental.

Paddle or *Oar*, with which the natives of the Friendly Islands row their canoes. It is about five feet long, and six inches across the widest part, and yet is so light as to weigh little more than a pound.

Various kinds of short *Hand Clubs*, or *Pattapattoos*, of different forms and materials. They are worn by the natives of the South Seas, in the same manner as daggers are worn by the Asiatics, and are usually made of hard wood, bone, green jade stone, or basaltes.

A *Knife*, from the Sandwich Islands, made of wood, edged with shark's teeth, used by the natives of those islands for cutting up their enemies taken in battle.

Basket, from New Zealand.

Axes, or *Adzes*, made of very hard black stone of the basaltes kind. The hatchets are wrought in a regular form with much labour, by rubbing one stone against another; with these the natives cut the wood for their canoes, war clubs, and household utensils; the heads of these axes are firmly fastened to the handles with strong cords, made of the fibres of the cocoa nut twisted together.

A large *Fish Hook*, for taking the shark; it is one foot long and six inches broad, and is made of a crooked piece of wood, pointed at the end with a substance resembling horn. Otaheite.

Near these are several of the Military and Domestic Implements of New Holland; presented by Dr. Jamieson.

Small Glass Case, marked A.

A pair of ponderous *Ear-rings*, made of white shells, from Christian's Island.

A *Necklace* of human bone, from New Zealand.

Beautiful *Feather Necklaces*, from the Sandwich Isles.

Gaiters, worn by the dancers of the Sandwich Isles. The ground-work is a strong, close netting, on which are fastened several hundred small shells, which, when put in motion, produce a rattling sound, to the music of which the dancers keep time.

In this Case is also a variety of the *Fishing Tackle* of the Sandwich and Friendly Islands. The hooks

are made of mother-o'-pearl, bone, or wood, pointed or barbed with small bones or tortoiseshell. They are of various sizes and forms; that marked A is the most common: it is between two and three inches long, and made in the shape of a fish, which serves as a bait. B is of a tortoiseshell.

The lines are made of different degrees of strength and fineness. That marked C is the finest kind, and is of human hair plaited together, and is used chiefly for things of ornament. D is a specimen of the common kind, made of the bark of the cloth tree, neatly and evenly twisted in the same manner as our common twine. E is a softer kind, made of the bark of a small shrub called *Aveemah*, plaited together, and is flat. That marked F is of great strength, being made of the plaited sinews of some sea animal.

They likewise make another sort of cordage, which is flat and very strong, and used principally in lashing the roofs of their houses, or whatever they wish to fasten together; it is made of the fibrous strings of the cocoa nut husk, in the same manner as our sailors make their points for the reefing of sails. That on the shark hook is of this kind. Considering the materials of which these hooks and lines are formed, their strength and neatness are really astonishing: "and in fact (says Captain Cook) we found them "upon trial far superior to our own."

The *Combs* marked G are from the Friendly Islands, and are specimens of their exquisite wicker-work.

A quantity of *Fishing Lines*, made from human hair, brought from the South Seas.

A *Net Mesh* from the South Seas.

A *Shoe* of a Chinese Lady.

A *Shoe* of Count Borulaski, the Polish Dwarf.

A *Tattowing Instrument*, from Otaheite. Captain

King, in his continuation of Captain Cook's third voyage, vol. iii, page 135, observes "That the Sandwich Islanders have the custom of tattowing the body in common with the rest of the natives of the South Sea Islands. The arms and hands of the women are also very neatly marked, and they have a singular custom among them, the meaning of which (Captain King says) we could never learn, that of tattowing the tips of the tongues of the females. From some information we received relative to the custom of tattowing, we were inclined to think it is frequently intended as a sign of mourning on the death of a chief, or any other calamitous event; for we were often told, that such a particular mark was in memory of such a chief, and so of the rest. It may be here too observed, that the lowest class of natives are often tattowed with a mark that distinguishes them as the property of some chief."

Model of a *Canoe*. Nootka Sound.

New Zealand *Canoe*.

Models of *Canoes* of different nations—Eskimaux, Davis's Straits, New Zealand, &c.

Lines for *Fishing*, made of human hair.

Basket to hold liquids; from the Sandwich Islands, South Seas.

Bread-Pounder, from Otaheite. It is made of black basalties, and is an astonishing effort of labour, executed by a people to whom the use of iron instruments are unknown. It is used in pounding the bread fruit.

Spear-Caster, from New Caledonia, by means of which the natives strike fish with a surprising celerity.

Caps, from Nootka, or King George's Sound, made

of sea grass finely woven together; on one is designed the process of their whale fishery. " This " (says Captain Cook) though rudely executed, " serves to shew, that though there is no appearance " of the knowledge of letters among them, they " have some notion of representing actions in a " lasting way, independent of what may be recorded " in their songs and tradition." They are worn by both sexes without distinction.

Hats, from South America, made of the feathers of parrots and other birds.

Matting, from the South Sea Islands.

A *Mantle*, from New Zealand. This kind of ornament passes under the right arm, and ties over the left shoulder, by which means both arms are at liberty. It is made of flax so curiously knotted together, that on examination it must astonish the beholder, more especially when he considers that it was made by a nation to whom the loom is unknown.

Wooden Sword, from Botany Bay. It is worthy of remark, that when Captain Cook first discovered New Holland, he was surprized to behold the natives so expert in handling the sword after the European manner, from which he concluded they had seen and copied the use of that weapon.

Bows and *Arrows* of different nations.

Two small *Cloaks*, made of feathers, to cover the shoulders—from the South Seas.

Glass Case of Botanical Subjects, marked B.

Most of the articles in this Case were presented to

the Museum by Dr. James E. Smith, President of the Linnæan Society.

Specimens of the *Bark* of the Lagetto Tree, the curious texture of which resembles gauze. King Charles II. (it is said) had a pair of ruffles and a cravat made from this bark, which were presented to him by a merchant from Jamaica, which he frequently wore. The cloth of the South Sea Islands is made from a similar bark.

Fine specimen of the *Banksia Serrata,* in flower. This is one of the four species of Banksia described in the Supplementum Plantarum of Linnæus, specimens of which are contained in the Herbarium of that great naturalist, now in the possession of Dr. J. E. Smith.

The *Banksia Serrata* is considered as the most stately of the genus: its trunk is thick and rugged. It is a native of New Holland, and received the denomination of *Banksia* in compliment to Sir Joseph Banks.

Banksia Serrata in Fruit, a fine specimen.—New Holland.

Wooden Pear, Xylomelum Pyriforme. This species was first discovered at Botany Bay, when the coast of New South Wales was first explored by Sir Joseph Banks and Dr. Solander. The natives call it the Merry-dugur-ro. The tree which bears this ligenous Pear is an evergreen.

Heath-leaved *Banksia,* Banksia Erici-folia; from New Holland.

Yellow *Gum,* from Botany Bay. Xanthorrhœa Hastile.

Cylista Comosa, from Sierra Leone.

Afzelia Speciosa, from Sierra Leone.

New Zealand *Flax* (Phormium Tenax) of which the natives make their cloaks, twine, &c.

Strings of *Beads,* made of Aromatic Berries, from South America.

Pod of a very large *Bean.* Cotton in the Pod and in Flower.

CURIOSITIES

From North and South America.

A *Dress* worn by the Eskimaux Indians, principally made of seal skins, with the hairy side outwards. It is a kind of jacket, nearly resembling a carter's frock, with a hood to it, that fits tight round the face, which is the only part of the body that is seen; the skirts of the frock reach nearly to the knee, and under it are worn a kind of drawers, made of the same materials as the above: the legs are covered with stockings made of skin, with very thick hair on, and over these are drawn a pair of curious boots, made of the skin of some sea animal. The whole of this dress is well calculated for the cold climate where it is worn. The sewing is performed with small sharp fish bones, and the sinews of the whale split into thin fibres for thread; yet we believe that few European tailors could exceed either the neatness or strength of the work.

Halter, made of the bark of the Lagetto or Cabbage Tree.

Maucassons, or *Shoes,* worn by the Indians of North America, ornamented with Porcupine quills and tassels of red hair. The leather is said to be dressed in blood, which prevents the wearer's feet from freezing; on which account they are often used by Europeans in that country.

A *Quiver of poisoned Arrows,* with the *Tube* used in discharging them; brought from Demerara. These instruments of destruction are nine inches long, and about the thickness of a small quill; they are made of a light wood, sharply pointed, and are dipped in poison to the depth of two inches, which generally proves fatal to the object that is wounded by them: they are discharged with unerring certainty, by being blown through a hollow tube of wood, nine feet long. Near the quiver hangs a small basket, which contains a down-like substance, a small piece of which is put into the tube after the arrow, which prevents the escape of the air, and causes it to fly with almost incredible velocity.

An ornamental *Belt,* used by the North American Indians, for bringing home the skins of animals taken in hunting excursions.

Bow and Fish Arrows, from the North-West coast of America.

Several *Pouches,* some of them very curious; from North America.

Pair of ornamental *Garters,* principally made of Porcupine quills; from North America.

A *Purse,* or *Tobacco Pouch,* made of the Skin of the Stiffling or Squash, ornamented with tassels of Deer's hair; from North America.

Ornament for the neck, made of the shells of some small hard nut; from Demerara.

Bow and Quiver of Arrows, from Demerara.

Several *Musical Instruments*, from Demerara, among which is a kind of Flute.

A great variety of *Bows* and *Arrows*, from Surinam.

Calumet, or *Pipe of Peace*, used by the North American Indians, to smoke tobacco, bark leaf, or herb, when they enter into an alliance on any serious occasion or solemn engagement; this being among them the most sacred oath that can be taken, and the violation of it is thought deserving of the punishment of Heaven.

A *Snow Shoe*, from Hudson's Bay, upwards of five feet long; it is very light, and covers such a space as prevents the feet of the wearer from sinking into the snow.

A pair of *Snow Shoes*, for a child.

A pair of *Snow Shoes*, from Canada, not so long as the preceding, but broader and rounder in front.

Neck Ornament, made of Feathers, from South America.

Two *Hammocks*, of curious workmanship, from South America; presented to the Museum by the Hon. Col. St. Leger, of Dublin.

Small Glass Case, marked C.

A *Wampum Belt*, of great value among the Indian Chiefs of North America, often given and received as a token of peace.

A *Cap*, from Africa, made of plaited Grass.

Chinese Money. These pieces have square holes through them, and are always strung together. Seventy-six of them are the value of an English sixpence.

Rouge, used by the Chinese ladies to colour their faces.

Specimen of the *Cloth* made of Amianthus, a soft species of Asbestos, that will remain in the hottest fire without burning. Pliny mentions his having seen napkins of this cloth, which being taken from the table after a feast, were thrown into the fire, and by that means were better cleansed than if they had been washed in water. But its principal use, according to that author, was for making shrouds for royal funerals, to wrap up the corpse, so that the human ashes might be preserved distinct from those of the wood.

Asbestos, or *Mineral Flax*, in its natural state.

Mica, or *Talc*, used for windows before the invention of glass. Clear white plates of this substance are used for glazing the lanthorns of men of war, as fire has little effect on it.

AFRICAN CURIOSITIES.

A singular *Musical Instrument,* from the Slave Coast, somewhat resembling the Italian Sticcado: it is made of pieces of hard sonorous wood, of different lengths, placed upon a frame, under which are fixed gourds of various sizes. It is played upon by beating it with two sticks, with balls at the end. On the coast of Africa it is called *Balafou;* and when it is played by a skilful hand, it produces an agreeable harmony.

A small kind of *Sticcado,* made of sonorous wood.

An *Instrument,* consisting of a small square board, on which are fixed pieces of very pliant wood, which, on being struck, produce a musical sound.

African King's *Sceptre,* in shape like a rod, being made of small split pieces of bamboo cane. These are valued according to their length, for by that the rank of the person is known; that of the King's being made of the longest joints of bamboo that can be found in his dominions.

Curious *Sword,* formerly the property of a Mandingo Chief. Inclosed in the hilt is a fettish or charm, to preserve the wearer's life, composed of a piece of skin of the Iguana, which in that country is held sacred.

Curious *Cartouch Boxes.*

A circular *Fan,* covered with a parchment-like skin, curiously painted.

Several *Pouches*, some of them very singular in construction.

A pair of *Sandals*, or *Shoes*. These, in Africa, are seldom used.

Common *Black Bottle*, curiously cased with wicker-work.

African *Comb*, similar to that of the Sandwich Islands.

A rude *Necklace*, composed of stones that have holes naturally through them, without boring.

African *Spoon*, made of wood.

Curious *Wooden Fan*.

A Lady's large *Pocket*, or *Pouch*, finely embroidered with the needle-work of the country.

African *Bows* and *Quivers* of long *poisoned Arrows*.

Great variety of African *Lances*, *Arrows*, and *Daggers*.—See the Daggers in the Armoury.

A small instrument, similar to a *Scottish Mull*, used for the purpose of grinding tobacco into powder.

African *Long Drum*, covered at the end with skin.

African Pair of *Bellows*, of very curious construction.

African *Harp*.

An African *Flambeau*, made of Flag-leaves, filled with a resinous gum.

Pouch or *Pocket*, made of grass, used by Negro servants to carry letters, &c.

A kind of *Hammock*, of singular net-work, used in Africa, either for sleeping or travelling.

Small *Gourds,* covered with Net-work, on the mesh-knots of which are strung a kind of Black Berries, that produce a sound similar to castinets. They are used by the Africans when they dance.

An African *Charm,* called *Fettish,* consisting of a *Ram's Horn,* to which is suspended a brass chain and bell. This is worn round the neck, and is imagined by the wearer to charm or drive away evil and tormenting spirits, and preserve life. It was taken from the breast of a black man engaged in battle, by Captain Clarke, of the ship Roebuck, of Liverpool, who presented it to the Museum.

Specimen of African *Cloth,* made of grass.

A curious *Sleeping Net,* or *Hammock,* from Africa; presented by Captain Roberts, of Liverpool.

WORKS OF ART.

Beautiful *Equestrian Model of Edward the Black Prince* in Armour, finely executed by Mr. G. Bullock of Liverpool.

Portrait of Mrs. Siddons in Queen Catherine, and *Mr. Kemble* in Coriolanus, by ditto.

Capital *Group of Figures,* representing the Progress of Inebriety;

A *Blind Beggar,* led by a Child;

Frederick the Great in his last illness;

And, a *Dead Christ.*

[The last four pieces are all modelled by Mr. Piercy, in coloured wax, and are universally admired by every lover of the arts, for the correct and spirited manner in which they are executed.]

A small *Anatomical Figure,* from the original of Dr. Hunter, done in Rice Paste, of its natural colour.

An exquisite *Model,* in Rice Paste, of the *Death of Voltaire,* by Mons. Oudon, of Paris.

Gothic *Model* of an *Ancient Armoury,* on a scale of an inch to a foot. It contains accurate models and representations of every kind of Armour and Warlike Weapon used in the British Armies, from the Norman Conquest to the Restoration of Charles II.

Group of Flowers, wonderfully cut in white Marble.

Model of a *Chinese Pagoda,* made of Mother-o'-pearl, ornamented with carving and gilding.

Complete *Model* of a *Man of War,* only six inches long.

A ditto, entirely of Ivory.

View of the Lake and City of *Geneva,* most inimitably carved in Ivory.

The City of *Messina,* taken from the Sea; the shipping, &c. executed with astonishing minuteness; some of the vessels, though not more than half an inch in length, have the sails, rigging, men, &c. perfectly distinct.

Windsor Castle, with the Thames.

Greenwich Hospital, with Shipping, &c.

Two pieces with *Stags* in a Forest.

[The above six are all in *Ivory,* carved in the most exquisite manner by Messrs. Stephany and Dresh.]

Sixteen hollow *Balls of Ivory*, cut within each other out of one solid piece by the Chinese in the most wonderful manner, every ball being pierced of a different pattern, almost as fine as lace.

Another ditto, with only eight Balls.

Several beautiful turnings in Ivory, by Mr. Perry, of London.

Picture of a *Saint* sailing on his Cloak, in Marble of its natural colours.

Beautiful Imitation of *Flowers*, made entirely of *Shells*, by Miss Humphreys, of Leicester-square.

Case of *Flowers*, made of Butterfly's Wings.

Holy Family, from Carlo Maratti, done in Wool, at Rome.

Picture of *Birds*, executed with Feathers.

Picture, which being viewed in different directions, produces three different subjects.

A Dutch *Merry-making*, from Teniers, in coloured Straw.

A *Jew Rabbi*, done with a hot iron on Wood.

Several copies of *Engravings* with Pen and Ink, by Mons. Mongenot.

Model of a *Man of War*, of sixty guns, entirely of Chrystal Glass; an early work of the Proprietor.

Complete *Model* of a seventy-four gun *Ship* at anchor, only six inches long.

Profile Heads of the following celebrated Painters: Titian, Rafaele, M. Angelo, Corregio, Carracci, and Carlo Maratti.

THE ARMOURY.

" Charm'd with the sight, the ardent breast is fir'd
" With thoughts like those which ancient bards inspir'd."

This department of the Museum is fitted up in an appropriate and elegant manner, representing the interior of the halls of our ancient nobility. The armour and various implements of war displayed in trophies, or on figures placed under gothic canopies, forcibly call to our minds the times of chivalry, and the days when our ancestors, by their deeds in arms, carried victory and conquest to every part of the world, and were " single handed" able to reduce that country to a state of vassalage that now threatens the independence of every government on the continent. Amongst this collection of antiquities, the Armour is what attracts the attention of every visitor: here an ample field will be open for meditation: the form, make, and materials of these war-suits will be a source of admiration and surprise: and when a thought is cast on the warriors, whose strength enabled them to bear such a weight of metal, and at the same time were capable of exerting themselves, performing under it every exploit; enduring every toil of war; he will feel himself as the offspring of a dwindled race of mankind.

The *Figure* on the Horse is dressed in *Hauberk*, or ancient suit of mail, such as worn in the army of William the Conqueror, when he invaded this country. It is composed of small rings of iron, which,

passing through four others, are riveted together in such a manner as not to prevent any motion of the body. Besides their ordinary clothes, the knights wore under their Hauberk a loose garment, called Gambeson, which descended as low as the knee; it was stuffed with woollen or cotton, and quilted; its use was to deaden the stroke of a sword or lance, which, though it did not divide the mail, might severely bruise the body. Between the Hauberk and Gambeson a breast-plate of iron, called a Plastron, was occasionally put on; and over all, men of family wore surcoats of satin, velvet, or cloth of gold and silver, richly embroidered with their armorial bearings. Thus enveloped, and loaded with such a number of weighty incumbrances, it is by no means wonderful that in the midst of summer, in the heat, dust, and press of an engagement, men at arms should be suffocated in their armour; an event which we learn from history often happened. Besides the inconvenience of being thus swathed up like an Egyptian mummy, a man could have but little power of action, and this in some measure accounts for the small number of knights slain in an engagement with cavalry only: probably as ransom was so great an object in those days, they rather wished to capture than kill their enemies, and for that purpose endeavoured to unhorse them; for when overturned, they were immoveable, and lay on the spot till remounted by their friends, or overtaken by their enemies. This venerable relic of antiquity came originally from the Castle of Tong, in Shropshire, and was presented by the Rev. Mr. Buckridge to the Museum of the late Richard Green, Esq. of Lichfield, from whence it was purchased by the present Proprietor. It is presumed that this Hauberk is the only perfect one of the kind remaining in England,

as there is not a specimen exhibited either at the Tower or British Museum. In the Treatise on Ancient Armour, written by the late Francis Grose, Esq. F. A. S. a description is given of this identical Suit of Mail, in vol. 2, page 9, plate 21.——This figure is mounted on a fine Horse, which is likewise covered by a suit of Ancient Armour, composed of several thousand plates of steel and brass, firmly united by riveted iron rings, of the same construction as the Hauberk, along with which it is supposed to have been worn. This kind of horse armour is believed not to have been common, even at the time when it was in use, as not a single specimen except the present has reached us, nor has a correct representation of it been published. On this account it must be highly interesting to those who are fond of examining such relics of antiquity.

The *Figure* on the left hand is dressed in a complete suit of *Pikeman's Armour*, worn by the arquebusiers and musketeers, at the first introduction of fire-arms. It is in fine preservation, and belonged to an officer who probably used it at the memorable siege of Latham House, as it was preserved at Cross Hall, in that neighbourhood, a considerable number of years. It was presented to the Museum by Col. Stanley, M. P. the present proprietor of Cross Hall.

On the right hand is the *Figure of a Knight*, in a suit of bright Steel Armour, of the time of Queen Elizabeth: this is called Plate Armour, and is of more modern date than the mail, as it came into general use about the middle of the fourteenth century. At its first introduction it was made of prodigious strength and thickness, and was fitted to every part of the body so close, that it was impossible to pierce it with a lance.

In Front of the Gallery,

Above the figure on horseback, is a suit of *Mameluke Armour and Accoutrements*, consisting of a Coat of Mail and Helmet: a Shield made of the skin of a Rhinoceros; an elegant and curious Gun, and a magnificent Sabre and Battle Axe. The Coat of Mail is made nearly in the same manner as the Hauberk, only the work is more beautiful: the collar is of crimson velvet, on which in gold studs is written in Persian the following characters:—"*Ali Fatima Husain Alla Mohammed.*" On the breast is a Talisman, or Charm, to preserve the wearer's life.

The stock, lock, and barrel of the musket is richly ornamented, and mounted with silver. This curious piece was taken from the Turks by Count Orlow, the Russian General; afterwards exchanged with an English gentleman for a fine horse: the gentleman presented it to the Right Hon. Lord Paget, who gave it to the Lichfield Museum, from whence it was purchased by the present Proprietor.

Near these is the *Haubergeon* or *Norman Suit of Mail.* This is made in the same manner as the Hauberk, only it is without sleeves, and reaches no lower than the waist. By the statute of Winchester, passed in the thirteenth year of the reign of Edward I. every man possessing lands to the yearly amount of fifteen pounds, and forty marks in goods, was obliged to keep in his possession an Haubergeon, an iron headpiece, a sword, a knife, and a horse.

On the opposite side of the Mameluke Armour, is a curious ancient *Buff Suit*, about the time of Charles

the First; presented to the Museum by the Bishop of Durham.

Near this is the *Roundel, Rondache,* or *Norman Shield.* (See Grose's Ancient Armour, plate 34, vol. ii.) This shield derived its name from its circular figure; it is made of rings of iron, fastened together, studded with brass, and lined with leather, but they were sometimes composed of oziers, boards of light wood, sinews or ropes covered with leather, plates of metal, or stuck full of nails in concentric circles or other figures. The Norman soldiers carried this shield fastened to a strap and hung over the shoulder. The roundels of metal, particularly those richly embossed, seem rather to have been insignia of dignity, anciently borne before generals or great officers, than calculated for war, most of them being too heavy for convenient use, or too slight to resist the violence of a stroke, either from a sword or battle-axe.

GLASS CASE OF GUNS.

Left-hand Side of the Armoury.

A very curious modern Fowling Piece, made by C. Malbon of Chester; it has two pans, the hind-

most is shut by means of a short lever or regulator, while the foremost is used. It fires twice with once charging.

A very curious Double Wheel-lock Musket, from the Grand Duke of Tuscany's Gallery at Florence. This piece has two pans, two wheels of steel, and two flints; by which contrivance it discharges twice with once loading.

A beautiful small French Fusee, of capital workmanship.

Two Highland Pistols, of different workmanship.

At the bottom of this Case is a curious ancient Missal, on its original stand, made of a solid piece of Oak, in an extremely curious manner.

Guns ranged on the right-hand of the figure of the Musqueteer.

A large Brass-barrelled Air Gun, by Kolbe.

The air being condensed between the outer and inner barrel, and the pump in the butt giving it the appearance and portability of a common gun.

Ancient Snaphaunce Musket.

American Rifle, taken at Fort Washington.

Magazine Gun, made at Pontefract, in Yorkshire, by Martin Raynald; it may with ease and safety be fired eight times in half a minute, with only once charging.

GUN CASE.

Right-hand Side of the Armoury.

A most superb Turkish Musket. The barrel richly damasked and inlaid with gold; the stock is of ivory mounted in silver, closely inlaid with gold, and ornamented with precious stones.

This magnificent and costly article was, with several other interesting curiosities, presented to the Museum by Sir Joseph Banks.

A curious and beautiful ancient Spanish Wheel-lock Rifle, the whole stock of which is entirely covered with the most exquisite inlaid work, in ivory and mother-o'-pearl, representing a variety of figures of men, beasts, birds, flowers, &c.

A fine Persian Match-lock, silver-mounted, the barrel richly damasked and inlaid with gold.

An elegant Turkish Sword, of singular form, called the Yatagan; the whole scabbard and hilt of silver, richly embossed and chased.

In the bottom of this Case is an illuminated manuscript Missal.

GUNS.

On the Left-hand Side of the Figure in Plate Armour.

A large and ponderous English Match-lock, date on it 1640.

An ancient English Fowling-piece, with a snap-haunch lock, the stock richly inlaid with ivory and pearl shells engraved. This piece is supposed originally to have belonged to the Skeffington family, formerly owners of Fisherwick, now the property of the Marquis of Donegal.

A Magazine Gun, made in Italy in the year 1666, which, when loaded at the butt end, may be discharged, by moving a short regulator, ten times in less than half a minute.

On the left side of the Armoury, over the Gun Case, is the Brigandine Jacket. This is mentioned in Jeremiah, ch. li. v. 3. and in an act passed by Philip and Mary, in 1558. It was used principally by the archers, and took its name from the light-armed troops who first wore it, being called Brigands. It is composed of a number of small plates of iron, sewed upon quilted linen through a small hole in the centre of each plate, the edges laid over each other like tiles, or the scales of fish: these scales are covered with cloth, so as to have the

appearance of quilting; it is proof against the push of a pike, or the stroke of a sword, and yet is extremely pliable to every motion of the body. The Helmet for this suit is called a Skull, or Steel Cap.

On the other side of the Canopy is a suit of Armour, such as was worn by the cavalry in the time of Oliver Cromwell; it was called Dutch Light Horseman's Armour.

Trophy of Persian Armour, consisting of a beautiful Match-lock Gun; a Shield made of the skin of the Rhinoceros (bullet proof); a Bow Case and Quiver of Arrows. On a line with these, is a Trophy of curious Guns and Swords of various kinds; among the latter are two with Pistols in the hilts, taken on board the Ville de Paris. Near this is a Suit of Pikeman's Armour complete; on each side of which is a Trophy of Fire Arms, consisting of a curious and extraordinary shaped Spanish Match-lock, of the kind first used; the stock is inlaid with ivory, very much curved, and intended to be placed against the breast when fired. A very singular English Match-lock, and several Wheel-lock and other Pistols.

Trophy of Chinese Armour, consisting of a Sword, Shield, Helmet, and Bow and Arrows.

On the right-hand side of the Armoury, forming a part of the rail in front, is a Long Gun, purchased at the late sale of the Leverian Museum. With this piece, General Wedderburne (brother to Lord Loughborough) was killed, when reconnoitering a fort in the East Indies. The distance from the fort was so great, that the shot could not be accounted for, until the place was taken, and this long gun discovered.

An Indian Match-lock Musket.

An Iron Spear, the handle of which is hollow and plated; it is from India, and used in hunting. An ancient Pike. The last three articles form a part of the rail.

Dispersed in various parts of the Armoury, are the following articles, mostly labelled:—

A great variety of Pieces of Armour, for all parts of the body; among which are several pieces presented by the Corporation of Stafford to the Lichfield Museum; and a number of Back and Breast Plates of different kinds, given by the Corporation of Coventry to this Collection.

Impression of a fine Roman Helmet.

An open-fronted Helmet, found in a ditch near Wigan, a few years since, on the spot where the Earl of Derby had a battle with the Parliament forces in the year 1651, in favour of Charles II.

A Helmet found at Carthage, about the year 1800, by J. Jackson, Esq. of Basinghall-street, London: it greatly resembles the Morions worn in Europe in the time of James I.

An open-fronted Helmet.

Several Pot Helmets, or Iron Hats, with broad brims.

The Plastron, or Breast Plate, usually worn under the Hauberk, &c. &c.

A very curious Mahratta Horseman's Sword, between four and five feet long, of excellent temper; the blade, which is very thin, is fixed into

a kind of gauntlet that reaches nearly to the wearer's elbow, and in which there is a grasp across the inside for the hand. See Grose, pl. 50, Nos. 1 and 2.

Two Highland Swords and Targets.

A variety of ancient Swords, of different nations.

A large Two-handled Sword, nearly six feet long.

Singular Iron Pike and Gun-rest.

Great variety of Gun Locks, some of them very curious.

Halbert, made in the time of Oliver Cromwell, formerly carried before the Mayor of Chester.

Indian Match Lock.

A Sack Bottle.

An ancient Hat, made of the undressed skin of the Wild Boar.

A pair of Warrior's Gloves, made of Buffalo's hide.

An ancient Buff Gauntlet, or covering for the left arm, worn in the time of Charles I. by Sir Francis Rhodes, of Balborough-hall, in Derbyshire. It is contrived to answer the purpose of a shield, being composed of three skins of buff leather, and of strong pasteboard.—It is figured in Grose's Ancient Armour, vol. ii, plate 39, fig. 5 and 6.

An ancient Cross Bow, remarkably strong.

The Stock of a very rich Arcubalista, or Cross Bow, found about the year 1773 by some labourers

on Bosworth Field, renowned in history for the victory obtained by the Earl of Richmond (afterwards Henry VII.) over Richard III. in which Richard lost his crown and life. It is so exquisitely carved, as to authorise a conjecture that it was the weapon of no mean warrior: indeed very few specimens of the chisel of the present day excel it. The bow is unfortunately lost, and the iron-work that remains is much corroded by lying, as it assuredly did, 298 years in the ground; on it there are yet to be discovered a number of studs and ornamental pieces of gold. It is made of yew, the compact texture of which wood has so well preserved it from decay. In a scarce poem, written by Charles Allen, which contains a particular account of the battle of Bosworth, are the following lines:—

"The archers stript their sleeves, who must define
"The controversie here debated on.
"The sun of Richmond's hope was in the sign
"Of Sagitarius, and there chiefly shone.
"The feathers of their shafts sung as they went,
"Being newly set to the one-string'd instrument."

This fine remain of antiquity is figured and described in the Gentleman's Magazine for February 1784, and which, with several other antiquities in this collection, were exhibited before the Royal Antiquarian Society, in the year 1803.

A number of Pikes and Lances from Africa.

Great variety of Irish Pikes, such as were used in the late rebellion.

A collection of Ancient and Foreign Stirrup Irons and Bridle Bits; some of them of an extraordinary size and weight.

Ancient Brass Hanging Candlestick.

Ivory Scabbard of Hunting Sword

Pub. by W. Bullock, London Museum, Piccadilly. April 24th 1812.

Small Glass Case.

An ancient Sword, formerly used by the English Noblemen in their Hunting excursions. On the hilt and scabbard of this sword (which are of ivory) are most exquisitely carved the death of every animal of the chase, comprising more than ninety-seven figures.—This admirable work of art serves in some measure to shew in what a magnificent manner our ancestors followed their favourite amusements; and it is imagined that few artists of the present day could produce so exquisite a performance. Within the scabbard are a knife and fork.

A very rich pair of Spurs, found in the spring of 1800, in ploughing Bosworth Field; they are of brass, enamelled, and very perfect.

A singular Iron Spur, the rowels of which are 13 inches in circumference.

Curious Iron Spur, enchased with silver; found on Bosworth Field.

Ancient Iron Spur.

Pair of Gilt Brass Spurs, such as are worn by the Knights of the Bath on days of ceremony.

Ancient Brass Snuffers and Stand of curious workmanship.

Ancient Irish Brass Sword, found near Navan, in Ireland, supposed to have been in use before iron was known in that country.

Ancient Brass Celt, found at Winwick, near Warrington, Lancashire.

Iron Arrow, purchased from the Leverian Museum, found in the year 1792 in the field on which stands the Castle of Harwood, Yorkshire.

Leather Skull Cap.

An ancient Brass Dish, supposed to be Saxon; on the bottom is a rude representation of the Annunciation, and round the edge a legend in Saxon letters.

Chinese Sword, of singular make, with a scabbard of wood, curiously carved.

A Moorish Spur, which weighs one pound three ounces; instead of rowels, it is armed with sharp pikes of the thickness of a person's finger, and about four inches in length. This singular instrument appears better designed to kill a horse than to urge it forward.

A large Turkish Powder Flask, mounted and embroidered with silver, formerly belonging to Prince Eugene, at the sale of whose effects it was purchased. Presented by Henry Blundell, Esq. Ince Hall.

An ancient Leather Bottle, embroidered with silk; it holds nearly a gallon.

Bandileers, or Wooden Cylindrical Boxes, used by the Musketeers of the reign of James and Charles I. for carrying their powder. Twelve of these were fixed to a belt worn over the left shoulder. The bag that carried the bullets was suspended to the belt.

Ancient Cornet. This horn is supposed to be of the earliest invention, and to have been one of the first kind of musical instruments used in a military band.

Case in Armoury.

A curious ancient Dish, inlaid with mother-'o-pearl and various coloured glass, &c.—Ancient Work Basket, made of cane and different coloured silk.—Large Hat, made of cane, curiously wrought, of the time of Elizabeth.

Pair of ancient Stockings, of crimson silk and gold; they are very strong, and curiously ornamented on the top: supposed to be of about the time of James I.

SHOES OF DIFFERENT NATIONS.

Roman Sandal. The strings which lace it in front, the sides, and bottom, most ingeniously made out of one piece of leather; it was found at the depth of fourteen feet, in cutting peat in Hawford Moss, Cheshire.

Turkish Slipper, of yellow leather.

Persian Shoe, red leather, embroidered with silver.

East India Shoes, of curious form, and highly ornamented.

A Pair of Bramin's Shoes, from the East Indies. Perhaps no article of dress, to the eyes of Europeans, will appear more extraordinary than these shoes :— they are made of hard wood of one piece, in the form of the sole of the common shoe, raised from the ground about the height of a patten, by a projecting piece of wood being left at the foot and at the heel. They are fastened to the feet by a peg of wood that stands between the two largest toes, which secures them in walking.

Chinese Men's Shoes; one of them of cane, beautifully wrought; the other of satin embroidered; the sole of woollen cloth, near two inches thick, and bent up before in such a manner as to keep the toes constantly raised.

Pair of Shoes worn by ladies in China, whose feet have been cramped by the use of the iron shoe; and a Model of the Leg and Foot. These are of a size so extremely diminutive, that on the first view it appears impossible they could have been worn by a full grown person; they are rather more than four inches long, and are not an inch wide in the middle. This ridiculous custom is said to be performed by breaking the bones of the feet of the females while infants, bending the toes under the soles of the feet, applying a tight bandage, and over that an iron shoe, which prevents the feet from enlarging, and render these unfortunate victims of fashion cripples for life.

An African Sandal.

A Russian Lady's Winter Shoe; it is of leather, with a sole of wood, lined throughout with thick fur.

Maucason, or Shoe of the North American Indians, ornamented with dyed porcupine quills.

Snow Shoe of a child, from Canada.

BIRDS.

——————— Almighty Being!
Cause and support of all things, can I view
These objects of my wonder; can I feel
These fine sensations, and not think of thee?

The Ornithological department of the Museum contains probably a greater number of species than is to be found in any other collection: they are in the highest possible state of preservation, and arranged in their respective families, according to the Linnæan classification, in a manner that has met the approbation of the scientific naturalist as well as the general visitor; as combining the whole of the Birds of one genus together, and exhibiting them in the order they stand in the *Systema Naturæ*, in such a way as to convey an idea of their haunts and mode of life.

King of the Vultures (Vultur Papa).

The Vulture is the most ravenous of the feathered race, since he kills prey not from choice, but in general devours only such animals as are dying, or found dead and putrid. His sense of smelling is so exquisite, that he is able to scent a dead carcass at an amazing distance. "They are," says Pennant, "greedy and voracious to a proverb, and not timid, "for they prey in the midst of cities, undaunted by "mankind." In some of the battles of the East,

where vast slaughter takes place of elephants, horses, and men, voracious animals crowd to the field from all quarters, of which Jackalls and Vultures are the chief. Even in the places where the last are at other times seldom observed, the plain on these occasions will be found covered with them. Vast multitudes will be seen in the air, descending on every side to partake in the carnage. These the Indians believe to be brought by having an instinctive presentiment of slaughter some days before the event. It is observed, that Vultures in general become less numerous as the climate becomes colder; and that in the more northern countries they are never found.—They are undoubtedly a kind dispensation of Providence in the hotter regions, to prevent the putrid effluvia of the dead from too much injuring the health of the living.

The black one in the same Case is a young bird of the same kind, previous to its attaining its perfect colour.

BRITISH EAGLES.—No. 1.

1. *The Female of the Golden Eagle* (Falco Chrysaëtos). Shot near London.

2. *The Fishing*, or *Sea Eagle* (Falco Ossifragus).

This extremely fine species, which measured 7 feet 9 inches in the extent of its wings, was killed in

March, 1810, in Lincolnshire, in the park of Sir Joseph Banks, by whom it was presented to the Museum.

3. *White-tailed Eagle* (Falco Fulvus).

4. *Black Eagle* (Falco Melanaetos).

EAGLES, No. 2.

In this Case is a variety of Birds of the Falco genus: several of them are very rare, from South America; those known have their name attached to them. Among the most conspicuous is a fine specimen of the *Bald*, or *White-headed Eagle* (Falco Leucocephalus). It is found in great plenty on the shores of Hudson's Bay; and I am informed by my brother (Lieut. Bullock, R. N.) who passed several winters at a Block-house on the coast of Labradore, that these birds were so bold as to be extremely troublesome, by watching for and seizing the game killed by the guns of our people, and often contending with them for the prize.

Golden Eagle (Falco Chrysaëtos).

This is one of the largest birds of the rapacious tribe; it measures, from the point of the bill to the extremity of the tail, upwards of three feet; its breadth, from wing to wing, about eight feet; and weighs from 16 to 18 pounds. The strength of this noble bird is such, that it can with ease carry a lamb; and several instances are recorded of its

Golden Eagle and White Hare.

Pub.d by W.m Bullock, London Museum Piccadilly April 1.1812.

having carried off children. It is found in various parts of Europe, but abounds most in the warmer regions; it has been known to breed in the mountainous parts of Ireland; it lays three, and sometimes four eggs, of which seldom more than two are prolific. It is finely preserved in the act of preying on the White Hare of Scotland.

HAWKS.

This Case contains 17 Birds of the rapacious kind, principally inhabitants of this island.

1. *Moor Buzzard* (Falco Ærugenosus).
2. *Common Buzzard* (Falco Buteo).
3. *Peregrine Falcon* (Falco Peregrinus).
4. *Ring-tail* (Falco Pygargus).
5. *Hen Harrier* (Falco Cyaneus).

This and the last are now proved to be male and female.

6. *Kestrel* (Falco Tinnunculus).
7. *Kestrel,* female.
8. *Sparrow-hawk* (Falco Nisus).

9. *Merlin* killing a Leveret.

10. *Domingo Falcon* (Falco Dominicencis).
Is one of the smallest and most beautiful of the Hawks.

11. *Domingo Hawk*, female.

12 and 13. Names unknown.

BUTCHER BIRDS (LANIUS).

These are the last genus of the rapacious tribe; they are bold and quarrelsome, mostly preying on small birds, which they tear in pieces, sticking the fragments on thorns. Some of them are natives of this country.

OWLS (STRIX).

This Case contains 13 of the most remarkable Birds of this genus, from the largest to the smallest known. They are carnivorous, and in general prey by night: those of this country, feeding principally on mice, are protected in the barns of our farmers on that account.

1. The *Great Horned Owl of Hudson's-Bay* (Strix Bubo) approaches nearly to the size of the Eagle: it is found in the most cold countries, and preys on hares and the larger species of game, &c.

2. *Large Owl,* unknown.

3. *Snowy Owl* (Strix Nyctea). This extremely beautiful and majestic bird is found in Europe, America, and Asia: contrary to the habits of the others, it preys by day on herons, hares, mice, and sometimes carrion—in winter it is quite white.

4 and 5. Pair of *Canada Owls* (Strix Eunerea). These make a near approach to some of the hawks.

6. The *Tawney Owl* (Strix Stridula) inhabits this country.

7 and 8. The *White* or *Barn Owls* (Strix Flammea) with their young.

9. The *Short-eared Owl* (Strix Brachyotos) a rare British species, visiting us the latter end of summer, and departing in spring.

10. *Little Owl* (Strix Passerina). The smallest and most rare of the British Owls, little larger than a blackbird.

11 and 12. *Indian Horned Owls* (Strix Indica) only seven inches long—the smallest known Owl.

Small Case of Owls.

The *Sooty Owl,* or *Cinerous Owl* (S. Cineria).

One of the peculiarities of the Owl genus, is the disproportionate largeness of the eyes: this species however is an exception to that circumstance, for in this, although one of the largest of the family (30 inches long) the eyes do not exceed those of the most minute. This does not appear to have been noticed by any author, probably from their not having examined them while living. It is a native of Hudson's Bay, and is said to prey in the day on hares, grouse, &c. Presented by Mrs. Lean, of Fenchurch-street.

The *Barred Owl* (S. Nibulosa). Is likewise a native of Hudson's Bay.

Three other Small Owls, one of them from Monte Video, undescribed; remarkable for its long and slender legs.

PARROTS (PSITTACUS).

These Cases contain a numerous and elegant display of the Parrot tribe, consisting of about ninety species of Maccaws, Cockatoos, Lories, Parrots, and Paroquets, of the most splendid and beautiful plumage, properly arranged and named.

Of all the foreign birds, the Parrot is best known in this country, and is most admired, nor without reason, as it unites the greatest beauty with the greatest docility. Its voice more exactly resembles the human than that of any other bird, and is capable of numerous modulations, which even the tones of man cannot reach. The facility with which this bird is taught to speak, and the degree of memory which it possesses, are not a little surprising. So numerous are the stories respecting the loquacious faculty of the Parrot, that they would fill a volume. Parrots are uncommonly numerous in the tropical climates: the forests swarm with them, and the beauty of their plumage, though not their natural voice, adds a degree of vivacity to the loveliest of scenes. Though the Parrot is commonly domesticated in Europe, it will not breed here on account of the cold. It indeed can survive our cold winter, but its spirits and appetite are both visibly affected by severe weather. It then becomes torpid and inactive, and seems quite changed from that bustling bird which it appears beneath a more genial sky. Nevertheless, with proper attention, it will live a number of years under the protection of man. The extreme sagacity and docility of this bird forms the only apology that can be made for the time which is spent in teaching it to talk. At first it obstinately resists all instruction, but seems to be won by perseverance; makes a few attempts to imitate the first sounds, and, when it has once acquired the articulation of one word distinctly, the rest of the lesson is generally learned with great ease. The sagacity and docility, however, which Parrots shew in a domestic state, seem also natural to them in their residence among the woods. They live together in flocks, and mutually assist each other against their enemies, either by their courage or their notes

of warning. They breed in the hollows of trees, where they make their nests. The larger kind lay only two or three eggs; but it is probable that the smaller ones lay more. The natives are very assiduous in finding out the places where they nestle, for the purpose of procuring the young; because those prove the most tractable and lively which are reared in confinement. Indeed the Indians are not anxious to possess these birds for their talking alone, for sale, or for their beauty, but also for food; since, though some are ill-tasted, others are very delicate eating, particularly the paroquet kind. Numerous as the species are, and widely as they are disseminated over Asia, Africa, and America, yet it appears that they were not very generally known to the Greeks. The green Paroquet with a red neck was the first of this family imported into Europe: for Onesicrites, the conductor or admiral of the fleet of Alexander the Great, brought them from the Island of Taprobane, the modern Ceylon. They were indeed so new and uncommon, that Aristotle, in his 8th book of animals, seems not to have seen them, and mentions them only from report; for he says, "there is an Indian bird, called the Psittace, which is said to speak." The beauty of these birds made them however objects of luxury among the Romans, who lodged them in cages of silver, or shells, and of ivory; and the price of a parrot often exceeded that of a slave. To enumerate what number of distinct species of these birds have already been discovered, would be impossible, since our vessels from New Holland and the southern islands are daily adding new ones to this extensive and beautiful genus.

The one in the larger Case, marked unique, is the property of A. Harrison, Esq. of Parliament-street,

Westminster, to whose liberality I am indebted for many of the rare productions of New Holland: it was received from Port Jackson, where it was killed by Colonel Johnson, and the only one known to have been killed at the colony.

TOUCANS (RAMPHASTOS).

This Case contains twelve of these highly singular birds, among which are the following:

White-throated Toucan (Ramphastos Toco). Male and Female.

The bill of this curious bird is of a most uncommon size, being nearly as large as the whole body, which gives the bird somewhat the appearance of having thrust its head into the claw of a large lobster; this extraordinary bill is seven inches and a half long, and seven in circumference; it is extremely slight, and as thin as parchment. This bird, so formidable in appearance, is quite harmless and gentle; it feeds principally on pepper, which it devours very greedily, gorging itself in such a manner, that it voids it crude and unconcocted; this, however, is no objection to the natives using it again. They even prefer it to that which is fresh gathered from the tree; and seem persuaded that the strength and heat of the pepper is qualified by the bird, and that all its noxious qualities are thus exhausted. It is a native of South America.

The *Piperine Toucan* (Ramphastos Piperivorus). Male and female.

Aracari Toucan (Ramphastos Aracari).
Is a native of South America, remarkable for the great size of its bill, as well as the beauty of colour.

Yellow-breasted Toucan (Ramphastos Tucanus).
Inhabits South America: habits, similar to the last.

In the same Case is the *Brazilian Motmot* (Momotus Brasiliensis).
This beautiful and remarkable bird is about eighteen inches long, though the body is not larger than that of a thrush: it inhabits unfrequented forests, building its nest on the ground, or in holes abandoned by the Armadillo, and lays two eggs; feeds on insects, which it macerates in water.

Near the last is a variety of it from Mexico, with the crown of the head roufous, and the feather of the tail not bare as in the other.

Above these is the *Channel Bill,* of New Holland, (Scythrops Psittaceus). The only one of that genus known.

ABYSSINIAN HORNBILL,

(Buceros Abyssinicus).

This Case contains fine specimens of the Male and Female of this rare and very curious bird. They are

upwards of 3 feet long; the extraordinary protuberance in the front of the head of all the birds of this genus, is in this species very remarkable, appearing as if cut through.

These birds were lately sent from Senegal, where they are said to arrive in a very exhausted state during the hot winds that blow from Abyssinia. In a state of confinement, they feed on rats, lizards, and other small animals.

HORNBILL, No. 2.

The *African Hornbill* (Buceros Africanus).

Of all the various forms which are met with in the heads of animals, those of the Hornbill appear the most extraordinary; to the enormous bill of the Toucans, nature has added a still larger projection from the forehead along the upper mandible, the precise use of which has baffled the research of the most attentive naturalist. Sixteen different species of these birds are enumerated by travellers and writers, the heads of many of which are preserved in this collection.

Pied Hornbill (Buceros Malabaricus).

Black-billed Hornbills (B. Nasutus). Male and female. They are natives of Senegal, and feed on fruits.

Red-billed Hornbill.

Dr. Latham, in his Synopsis, makes these only variety of the former. Linnæus thought them male and female, and Buffon thought they differed only from age ; but by comparing them, the beak will be found to differ exceedingly in shape, so much so, as to leave no doubt with me of their being distinct species.

CROWS (CORVUS).

This Case contains a great variety of the birds of this genus, some of which are highly beautiful in their plumage, while others surprise by their singularity. The various kinds are found by navigators inhabiting every part of the known world. They are in general clamorous and mischievous birds, easily tamed, and several imitate the human voice distinctly. They are promiscuous feeders ; carrion is a favourite food, but they do not object to cater for themselves by killing rabbits, young ducks, chicken, or any small animals they have strength to overpower. Ten species are found in Great Britain.

ROLLER (CORACIAS).

These are, in their manner and general habits, much allied to the last: many of them are of the most vivid plumage, of which the Senegal Roller will serve as an example.

ORIOLES (ORIOLUS).

AND

GRAKLES (GRACULA).

This Case contains about 40 Orioles and 8 Grakles.

The Orioles are chiefly natives of America, where, by their prodigious numbers, and their voracity, they do great injury to the plantations of corn; many of the species build pendulous nests, some of which are suspended at the extreme ends of the branches of trees, with the entrance either at the bottom or side.

They are birds of considerable beauty, the general prevailing colour being black, contrasted with bright red and yellow.

The Grakles are mostly natives of India, where they are frequently kept in cages: some of them imitate the human voice much nearer than any of the parrot kind, for which reason they are frequently brought to this country. They principally feed on vegetables.

BIRDS OF PARADISE.

This Case contains, it is presumed, the finest collection of the birds of this kind in Europe, either in respect of number, variety, or preservation.

Greater Bird of Paradise (Paradisea Apoda).

No birds have perhaps more puzzled the naturalist than those which are termed Birds of Paradise. They have been described as the inhabitants of the air, never resting on the earth, and living on the dews of heaven. Others have asserted, that they live on insects; while some have insisted, that they have no legs; others again contend, that they have not only strong and large legs, but that they are birds of prey. But the fact is, that the inhabitants of the Molucca Islands, perceiving the inclinations the Europeans have to obtain these birds, and at the same time taking advantage of their credulity, originally practised many deceits in order to enhance their value. Error however is not of very long duration; and, in the present instance, it was at length discovered that these birds had not only legs, but that they were so disproportionably large, that they took away a considerable share of the elegance of the birds; on this account it is not improbable they were deprived of them by the islanders. Buffon, in his history of birds says, this beautiful bird is not much diffused, it is in general confined to that part of Asia which produces the spiceries, and especially the islands of *Arou*. It is known also in the part of New Guinea opposite to those islands; but the name which it there receives, *Burung Arou*, seems to indicate its natal soil. The

Birds of Paradise. 1. King. 2 Black. 3. Majo...

Pub. by W. Bullock, London Museum, Piccadilly April 1. 1812.

Bird of Paradise is supposed to subsist on the aromatic productions of these islands; at least, it does not live solely on dew. Linnæus says, it feeds on large butterflies; and Bontius, that it sometimes preys upon birds. Its ordinary haunt is in the woods, where perching in the trees, the Indians watch it in slender huts, which they attach to the branches, and shoot it with their arrows of reeds. The ancients seem to have been totally unacquainted with the Bird of Paradise. Belon pretends that it was the Phœnix of antiquity; but his opinion is founded on the fabulous qualities of both. The Phœnix, too, appeared in Arabia and Egypt, while the Bird of Paradise has remained always attached to the oriental parts of Asia, which were very little known to the antients.—The extreme elegance of the tail-feathers of this bird have made them expensive articles of female decoration.

Lesser Bird of Paradise.

This differs from the last, in being considerably less, and in having a long flowing feather at the sides, of a much finer texture and colour.

The *Magnificent Bird of Paradise* (Paradisea Magnifica).

The *Gorget Bird of Paradise* (Paradisea Nigra).

This is a most splendid and beautiful bird, and likewise extremely rare. Presented by Lady Banks.

Gold-breasted Paradise Bird (P. Aurea).

A remarkably fine specimen.

King Bird of Paradise (Paradisea Regia).

This superb bird is usually called the King of the Birds of Paradise; but this appellation is drawn from fabulous accounts. Clusius was informed by the mariners, from a tradition which prevailed in the East, that each of the species of the Birds of Paradise had

its leader, whose royal mandates were received with submissive obedience by a numerous train of subjects; that his majesty always flew above the flock, and issued orders for inspecting and tasting the springs, where they might drink with safety. It inhabits the islands of the Indian Ocean, and returns to New Guinea in the rainy season; feeds on berries, is a solitary bird, and is highly valued on account of its rarity and beauty of plumage.

Black-bodied Bird of Paradise.

This beautiful and uncommon bird, which does not appear to have been seen by any English writer, is, like the others, a native of the Molucca Islands, but is a rarity even in that country; the plumes being worn only by persons of the first rank; the whole of the head, neck, body, and tail, is a fine black, with a velvet-like gloss, the latter changing in some lights to a rich purple. The bill is long, black, and somewhat hooked; the feathers under the lower mandible reaching a considerable part of its length: from the back of the neck rises a divided tuft of long, thick, close-set black feathers, edged with resplendent emerald green; from the sides of the body and wings rise two tufts of long delicate silky feathers, as in the common Bird of Paradise, only smaller, six on each side of which have strong black wire-like terminations about nine inches long, destitute of every appearance of feathers.

Blue Green Bird of Paradise (Paradisea Viridis).

Golden Bird of Paradise (Latham's Synopsis, vol. 1, page 483).

Superb Bird of Paradise (Paradisea Superba).

Pair of Birds of Paradise, undescribed.

The *Red Bird of Paradise.*

This beautiful and very rare bird we are acquainted with through the figure in the splendid publication of Oiseaux Dores, in which it is called *Le Paradis Rouge:* it seems to be nearest allied to the greater Bird of Paradise, the principal difference being in the colour of the long side feathers which rise under the wings, being in this of a fine red, and that instead of the long wire feathers in the tail it has two curious appendages resembling flat pieces of polished whalebone. This specimen is believed to be the only one ever brought to England.

Black Bird of Paradise (Paradisea Furcata).

The *Grand Hoopoe* (Latham's Synopsis, vol. 2, page 695.)

(*Le Grand Promerops à paremens frises,* Buffon, vol. 4, page 472.)

This magnificent bird is thus described by Mr. Latham:—"This most extraordinary and beautiful "bird is near four feet in length from the tip of the "bill to the end of the tail; the body is the size only "of a middling pigeon, though much elongated in "shape. The bill is three inches long, pretty much "curved, and black; the head, hind part of the neck, "and upper part of the belly, are of a shining green; "the rest of the plumage, on the upper parts, black, "mixed with a gloss of changeable violet, but the "wings, in some lights, appear blue; the fore part "of the neck, and lower part of the belly, without "gloss. The scapular feathers are of a singular con-"struction, the webs on one side of the shaft being ex-"ceedingly short, and on the other of a great length; "the shape of them falciform; they are of a purplish "black colour, with the ends for three quarters of "an inch of a most brilliant, gilded, glossy green,

" though some of them in a different light reflect
" a blue gloss; beneath each wing rises a thick tuft
" of feathers eight inches and a half in length, and
" of a texture resembling the herring-bone ones in
" the greater Bird of Paradise."

A Pair of New Holland *Birds of Paradise* (P. Parkinsonia) ; one presented by the Countess of Liverpool, the other by Dr. Smith, President of the Linnæan Society.

CUCKOWS (CUCULUS).

This Collection contains nearly 40 species of this family. The habits of the common Cuckow are well known, and may serve to give a general idea of most of them. They are scattered over most parts of the world, some of them are of fine plumage, as the Cupreous, which is an inhabitant of the hottest parts of Africa, where however it is rare: the rich metallic glossy green with which the whole upper parts are covered, can only be equalled by the glowing tints of the Humming Bird.

WOODPECKER (PICUS).

The birds of this genus climb up and down trees in search of insects, which they transfix and draw

out from the clefts of the bark by means of the tongue, which is bony at the end, barbed, and furnished with a curious apparatus of muscles for the purpose of throwing it forward with great force. They build in decaying and dead trees, which they perforate with their hard, wedge-shaped bill. Their feet are very strong, having the toes placed two before and two behind, and in climbing are assisted by the strong pointed feathers of their tail: some of them are found in England. There are upwards of forty in this Case, in which are also a few of the next genus in the Linnæan arrangement, the *Nuthatch* (Sitta), whose mode of life are much like the Woodpecker, from which they differ in having the toes placed three before and one behind.

KING-FISHER (ALCEDO).

The birds of this family vary much in size; some of them are very splendid in their plumage, in which bright blue is the colour that predominates in the whole tribe. They mostly frequent rivers, and feed on fish, which they catch with much dexterity: they swallow their prey whole—their wings are short, yet they fly with great swiftness. The only one found in this country is the common *King-fisher* (Alcedo Ispida).

The Greeks celebrated this bird by the name of *Alcyon,* or *Halcyon;* the epithet *Alcyonian* was applicable by them to the four days before and after the winter solstice, when the sun shone brilliantly, the sky serene, and the sea smooth and tranquil. It was then the timorous mariners of antiquity ventured to lose sight of shore, and shape their course on the glassy main. The King-fisher is the most esteemed of British birds for the brilliancy of its colours. It nestles on the banks of rivers and brooks, in holes made by water-rats. Gessner observes, that it can never be tamed, and that it is always wild. Its flesh has the odour of bastard musk, and is very unpalatable food; its fat is reddish; its stomach roomy and flaccid, as in birds of prey; and like them too it discharges by the bill the undigested fragments, scales, and bones, rolled into little balls.

In the same Case are a few of *Jacamars* (Galbula), the plumage of some of which partakes of the metallic lustre of the Humming Bird.

BEE-EATERS (MEROPS).

The birds of this genus are mostly natives of the Old Continent, few being found in America; but the discovery of New Holland has brought us acquainted with a number of species that were unknown to us before. Their general food is said to be insects, and

that they build their nests in holes on the banks of rivers in the same manner as the King-fisher, to which they seem much allied.

The *European Bee-Eater* (Merops Apiaster), is a native of many of the warmer parts of Europe, but is rarely seen in the British dominions. It is extremely common in Greece, and the islands of the Archipelago; and in Crete is most plentiful. It is in this latter island that the curious mode of bird-catching, described by Bellonius, is said to be frequently practised with success, viz. a cicada is fastened on a bent pin, or a fish-hook, and tied to a long line. The insect, when thrown from the hand, ascends into the air, and flies with rapidity; the Merops, ever on the watch, seeing the cicada, springs at it, and swallowing the bait, is thus taken by the Cretan boys.

CREEPERS (CERTHIA).

These birds bear a strong resemblance to the Humming-Bird as to size and the varied tints of glossy colouring, but the legs are always longer, and the bill in general more bent and sharper at the point. They are likewise dispersed over every part of the world, while the Humming Birds are confined to America.

Their food is insects, which they find under the bark of trees. The common Creeper (Certhia Famili-

aris) of this country, is an example (says that excellent Ornithologist, Dr. Latham) of the facility with which they run in every direction on the smoothest tree, like a fly on a glass window.

HUMMING BIRDS.

(Trochilus.)

Say, who can paint
Like Nature? Can Imagination boast,
Amid her gay creation, hues like these?
THOMSON.

This Case contains nearly 100 various *Humming Birds,* and is allowed to be the finest collection in Europe: such as are known have their names in the order they stand in the system of Linnæus. Of all animated beings (says Buffon) the Fly Bird is the most elegant in form, and superb in colours. The precious stones, polished by art, cannot be compared to this jewel of nature. Her miniature productions are ever the most wonderful; she has placed in it the

order of birds, at the bottom of the scale of magnitude; but all the talents that are only shared amongst the others, she has bestowed profusely on this little favourite. The emerald, the ruby, and the topaz, sparkle in its plumage, which is never soiled by the dust of the ground. It is inconceivable how much these brilliant birds add to the high finish and beauty of the western landscape. No sooner is the sun risen, than numerous kinds are seen fluttering abroad: their wings are so rapid in motion, that it is impossible to discern their colours, except by their glittering; they are never still, but continually visiting flower after flower, and extracting the honey. For this purpose they are furnished with a forked tongue, which enters the cup of the flower, and enables them to sip the nectared tribute; upon this alone they subsist. In their flight they make a buzzing noise, not unlike a spinning wheel; whence they have their name.

The nests of these birds are not less curious than their form: they are suspended in the air at the extremity of an orange branch, a pomegranate, or a citron tree, and sometimes even to a straw pendant from a hut, if they find one convenient for the purpose. The female is the architect, while the male goes in quest of materials, such as fine cotton, moss, and the fibres of vegetables. The nest is about the size of half a walnut. They lay two eggs at a time, and never more, in appearance like small pease, as white as snow, with here and there a yellow speck. The time of incubation continues twelve days, at the end of which the young ones appear, being then not larger than a blue-bottle fly. "I could never per-" ceive (says Father Dutertre) how the mother fed " them, except that she presented the tongue co-" vered entirely with honey extracted from flowers." Those who have tried to feed them with syrups could

not keep them alive more than a few weeks; these aliments, though of easy digestion, are very different from the delicate nectar collected from the fresh blossoms. It has been alleged by various naturalists, that during the winter season they remain torpid, suspended by the bill from the bark of a tree, and awakened into life when the flowers begin to blow; but these fictions are rejected; for Catesby saw them through the year at St. Domingo and Mexico, where nature never entirely loses her bloom. Sloane says the same of Jamaica, only that they are more numerous after the rainy season; and prior to both, Marcgrave mentions them as being frequent the whole year in the woods of Brazil.—The method of obtaining these minute birds is to shoot them with sand, or by means of the trunk-gun; they will allow one to approach within five or six paces of them. It is easy to lay hold of the little creature while it hums at the blossom. It dies soon after it is caught, and serves to decorate the Indian girls, who wear two of these charming birds as pendants from their ears. The Indians, indeed, are so struck and dazzled with the brilliancy of their various hues, that they have named them *the Beams,* or *Locks of the Sun.* Such is the history of this little being, who flutters from flower to flower, breathes their freshness, wantons on the wings of the cooling zephyrs, sips the nectar of a thousand sweets, and resides in climes where reigns the beauty of eternal spring.

DUCKS (ANAS).

We are now arrived at the third Order in the Linnæan classification, called *Anseres*. The whole of the birds in this order have webbed feet, and reside principally on the water.

These Cases contain upwards of forty species of the genus Anas, or Duck, many of them of the larger size.

The *Black Swan* (Anas Atrata), of New Holland; the *Canada Goose* (A. Canadensis), and the *Egyptian Goose* (A. Ægyptiana), lived some time in the Queen's Menagerie at Frogmore, and were graciously presented to the Museum by her Majesty, to whose condescension I am indebted for many of the fine subjects of Natural History in my collection.

The *Spur-winged Geese* (Anas Gambensis), male and female; and the highly curious, non-descript species, having a very high crest-like protuberance, the whole length of the upper mandible: they were lately sent from the interior of Africa, on the banks of the Gambia, by M. De Bonay, of Senegal, by whose exertions this collection has been considerably enriched, by the addition of many extremely curious and hitherto unknown Quadrupeds and Birds.

In these Cases are also the *Lobated Duck* of New Holland (Anas Lobata), so called from the fleshy appendage attached to the under mandible; and the

Chinese, or *Mandarine Duck* (Anas Galericulata), perhaps the most beautiful of the whole genus, as well as nearly every species found in this country.

MERGANSER (MERGUS).

Crested Merganser (Mergus Cucullatus), male and female; remarkable for their large globular crest: they are natives of North America.

The *Goosander* (Mergus Merganser).

Dewdiver (Mergus Castor).

The *Smew,* or *White Nun,* (Mergus Albellus).

The *Minute Mergus* (Mergus Minutus).

WATER FOWL (ANSERES).

Little Auk (Alca Alle). A rare British bird.

Patagonian Penguin (Aptenodytes Patachonica).

This highly curious bird seems to form the connecting link between the feathered and scaly race.

It is upwards of three feet in height; its fin-like legs being placed at the extreme end of its body, it can stand in no position but quite upright; in place of wings it has two dangling flaps, which when in the water serve as fins, but are of no use on shore, as it is totally incapable of flight; it seldom comes to land, but for the purpose of depositing its eggs; it is then so easily taken, that Capt. Cook says, a man might kill with a stick, in a few hours, as many as would load a large boat.

Little Penguin (Aptenodytes Minor). Inhabits New Zealand.

Crested Penguin (Aptenodytes Chrysocome).

Black Darters (Anhinga Melanogaster).

These are natives of the lakes and rivers of Brazil; they live chiefly on fish, which they take by darting forward the head, whilst the neck is contracted like the body of a serpent. Mr. Abbot, the naturalist, of Savannah in America, says that he examined a nest that had two eggs and six young, of three different sizes, which he believes belonged to different females. They are extremely difficult to shoot, keeping the head only above water.

The *Black Skimmer* (Rynchops Nigra).

Is remarkable for its singular bill, the lower mandible of which projects considerably beyond the upper, into which it fits like a razor in its handle. It inhabits America and Asia, and is continually flying about and skimming over water, out of which it scoops small fish with its oddly projecting bill.

PETREL (PROCELLARIA).

These birds may with great propriety be called inhabitants of the ocean; they are met with at the greatest distance from land, and seem to walk, rather than fly, on the surface of the most tempestuous billows, never approaching the shore except in the breeding time: the nostril is furnished with a long tube, through which they spout a quantity of pure oil to a considerable distance, in the face of the person who disturbs them. They are said to feed on the dead fat of the whale and other large fish.

The *Stormy Petrel,* or *Mother Carey's Chicken* (Procellaria Pelagica) is sometimes found on our coast, and I have known several instances where they have been picked up dead in the inland counties: they sometimes follow the wake of a ship, but on these occasions are always unwelcome visitors to the mariner, who considers their presence as a certain prognostic of an approaching storm.

The *Snowy Petrel* (Procellaria Nivea).
Inhabits the colder parts of the South Seas.

The *Grey Petrel* (Procellaria Grisea), male and female.

Pintado Petrel (Procellaria Capensis).

Shear-water Petrel (Procellaria Puffinus), a native of this country.

The *Wandering Albatross,* or *Man-of-war Bird,* (Diomedea Exulans).

This bird is frequently mentioned by navigators, as being met with several hundred leagues from land; in its figure and manner it bears a strong resemblance to the Gulls, but is of such an extraordinary size as to measure 13 feet from the tip of one wing to the other.—Presented by the Marquis of Buckingham.

PELICANS (PELICANUS).

The whole of these are extremely expert in catching fish, and are sometimes tamed for that purpose, when their labours amply repay their keeper for the trouble of their education.

The *Great White Pelican* (Pelicanus Onocrotalus), is a native of Asia, Africa, and South America; it is five feet long, of a white colour, slightly inclining to rosy; it is said to build its nest in dry sandy deserts, where it carries water in its immense pouch for its young, from which probably arose the fabulous account of their feeding their young with their blood, and of their being made an emblem of parental affection by the ancients.

The *Lesser Frigate Pelican* (Pelicanus Minor).

The length of this bird is about two feet eight inches; the extent of wing more than seven feet;

the colour, sooty black; the pouch or gullet, bright scarlet. Perhaps none of the feathered tribe continue so much on the wing as this; they are met with at sea, at an immense distance from any land, and generally flying very high.

Red-faced Shag (Pellicanus Uriel), from Kamtschatka.

Corvorant (Pellicanus Carbo).

Shag (Pellicanus Graculus).

Tufted Shag of the Bass Island.

Two of these birds, both females, were shot by myself on the 9th of May, 1807, on the Bass Island, in the Frith of Forth, where they are believed to breed and remain the whole year; the general appearance, both in size and colour, was nearly similar to the common Shag, and the number of tail feathers the same; the most striking difference arises from a singular tuft of forty-six narrow and nearly straight feathers, two inches long, standing close together upright, with a slight bend forward on the front of the forehead, in so remarkable a way as at once to distinguish it from any described species. The origin of the lower mandible, and the naked pouch under the throat, was of a bright yellow, approaching to orange, with small spots of black; the irides, a beautiful grass green, and it had no bare space round the eyes; the ovaries of both specimens contained a number of small eggs, and from the account of the person who takes the young Gannets at the Bass, and who possesses considerable knowledge of the birds that visit it, there can be little doubt of its being a new species, and of its rearing its young in the inaccessible precipices of that island; and it is somewhat surprising that it should have remained so long unnoticed

Tufted Shag.

Pub. by W. Bullock, London Museum Piccadilly, April 1 1812.

in the neighbourhood of so many naturalists and ornithologists as Edinburgh contains: the flesh was eaten, and found to be entirely destitute of that rancid smell and taste that affect the generality of the cormorant tribe. I have observed, what appeared to me to be the same species, on Lambay Island, on the east coast of Ireland.

Gannets, or *Soland Geese* (Pellicanus Bassanus).

This beautiful species of Pelican is diffused over most parts of the ocean, but seldom approaches the land except at the breeding season; it received its trivial name from its frequenting, in immense quantities, the Bass Island, in the Frith of Forth, on the east coast of Scotland. In the spring of 1807, I visited this celebrated rock (once the state prison of Scotland), accompanied by Arthur Strickland, Esq. of York, for the purpose of procuring specimens of the various water-fowl that annually resort to it at that season of the year for security, during the important business of rearing their young.

We arrived under the towering and tremendous projecting cliffs of the east end, just before sunrise, and approached as silent as possible. At a little distance, the precipice appeared as if composed of chalk; but on a nearer approach, we discovered that this effect was produced by the excrement, as well as by the white plumage of the innumerable water-fowl that covered the cliffs. The whole of the various families were just awake, and preparing, by shaking their feathers and pluming their wings, for the busy occupation of the coming day. After attentively observing them for some time, on a given signal we fired our guns, and the boatmen shouted altogether, when such a scene took place as I had never witnessed: in an instant our ears were assailed and

deafened by the varied and continued cries of at least 100,000 birds—Gannets, Cormorants, Shags, Puffins, Razor-Bills, Gulimots, and the various kinds of Gulls, raised their discordant notes at the same moment, and by their numbers formed a canopy over our heads that darkened the air, while their excrement, occasioned by the sudden alarm we had put them in, fell in a thick shower on every side. After the confusion had somewhat subsided, we proceeded to the west end of the island, and ascending to the summit, found ourselves above the cliffs, where the Gannets were sitting, close to each other, on their eggs. We crept cautiously down amongst them, and so attentive were they to their occupation of sitting, that it was with difficulty they could be forced from their eggs, though at other times they are extremely shy.—They lay but one egg, which is perfectly white, and in shape and size nearly resembles that of a crocodile; it is placed on the bare rock, surrounded by a circle of wet sea-weed, which is constantly replenished by the male as it becomes dry. I had been told, but doubted the fact, that during the time of incubation the female holds the egg in her foot: this I found to be the case.

In a visit I made in the August following, the young were many of them gone; but still I had an opportunity of examining them in their different ages, previous to their leaving the island. When first produced from the egg, they are black and very ugly; in a few days they become covered by a resplendent white down; in about a month afterwards, their first feathers begin to appear; they are black the first year, spotted with white the second, and on the third attain their mature plumage. The specimens in the regular progression, taken at that time, are in the Museum.

3, White Spoon Bill. 2 Puffin. 1 Boat Bill.

Pub. by W. Bullock, London Museum Piccadilly April 1812.

GULLS (LARUS),

AND

TERNS (STERNA).

The Birds in this Case are principally natives of the shores of this country, breeding in the rocks on the sea coast in considerable numbers. Like many of the sea fowl, they do not arrive at their perfect colour for three years, which makes it difficult to determine their species.

The *Herring Gull* (Larus Fuscus), lived in Frogmore Park nearly two years, and was presented to the Museum by the Queen.

The *Black-toed Gull* (Larus Cripidatus), is a rare British bird; shot in Lincolnshire. Presented by Sir Joseph Banks.

SPOONBILLS (PLATALEA).

The bill of this remarkable species is long, and toward the extremity spread out in a spoon-like form. The *White one* (Platalea Leucorodea), was

formerly not very uncommon in this island; but since the introduction of fire arms, and the improvement that has gradually taken place in the art of shooting, they have, with other birds then found in plenty, left this country for others more retired.

The *Roseate Spoonbill* (Platalea Ajaja), is a native of South America.

JABIRU (MYCTERIA).

American Jabiru (Mycteria Americana).

This extraordinary and majestic bird is nearly six feet long; it inhabits the extensive marshes of South America, feeding on fish, which it devours in large quantities; it builds its nest in trees which hang over the water, and lays two eggs. Presented by Lord Teignmouth.

Senegal Jabiru (Mycteria Senegalensis).

Measures upwards of six feet from the bill to the toes; it is the only one known in this country; it was first described, from an imperfect specimen, by Dr. Shaw, in the 5th volume of the Linnæan Transactions. It was lately received from the river Gambia, and presented, with several other rare and valuable birds of Africa, by Henry Brogden, Esq.

A non-descript species of *Jabiru*, the native country unknown; it lived some time in a state of confinement in Exeter 'Change, and was fed with fish.

CRANES, No. 1.

(Ardea).

Numidian Crane, or *Demoiselle* (Ardea Virgo).

This beautiful bird has received the name of Demoiselle, or Miss, on account of its elegant form, its rich garb, and its affected airs. It was famous amongst the ancients, though it was little known or seen in Greece or Italy.

A large species of *Crane,* from New Holland; seems nearly allied to *Ardea Antigone* of Linnæus. Length, five feet nine inches; breadth of the wing, six feet three inches; general colour, bluish ash, except the quills and chin, which are black; top of the head without feather, ash colour; the regions of the eyes and back of the neck covered by a carunculated skin of bright vermilion colour. Presented by Dr. Munro, jun. who received it from New Holland, where it was killed by Dr. Jamieson.

Great White Heron (Ardea Alba).

Green Heron (Ardea Virescens).

Cinereous Herons, male and female.

CROWNED CRANES.

Pair of *Crowned African Cranes* (Ardea Pavonia).

These owe their title of Royal to a sort of crown which decorates their head. They inhabit Africa, especially Gambia, the Gold Coast, and Cape Verd. They are of a gentle and pacific disposition; their defence is their stature, and the rapidity with which they run and fly. They are less afraid of man than of their other enemies: we are assured, that at Cape Verd these birds are half domesticated, and that they come into the court-yards to eat grain with the Guinea fowls. Their cry is like the peacock's. The Portuguese, in the 15th century, it is supposed, were the first people that brought these birds into Europe, at the time they discovered the Gold Coast.

In the bottom of this Case is the *Bull Frog* of *America* (Rana Maxima).

BITTERNS (ARDEA).

Agami Heron (A. Agami).

Is a beautiful bird, inhabiting the swamps of Cayenne.

The *Striated Heron* is likewise from Cayenne, and, when closely examined, has much beauty of plumage.

Tiger Bittern (A. Tigrina).

Remarkable for the strong contrast of its rich colouring, which resembles the animal from which it is named.

Little Bittern (A. Minuta). Shot in England, where it has lately been several times killed.

Minute Bittern (A. Exilis).

The smallest of the genus, only eleven inches long: from Monte Video.

White Stork (A. Ciconia).

Was formerly an inhabitant of this island; is still plentiful in Holland, where it is protected by very severe laws.

Common Heron (A. Major).

Great Egret (A. Egretta).

Little Egret (A. Garzetta).

This very beautiful bird was formerly very common in England.

Blue Heron (A. Cœrulea).

Squacco Heron (A. Comata).

Snowy Heron (A. Candidissima).

Malacca Heron (A. Malaccensis).

Bittern (A. Stellaris).

IBIS (TANTALUS).

Sacred Ibis. This remarkable Bird, which is the first exhibited in this country, has just been received from Africa, and lately described by a French naturalist as the celebrated sacred bird of the Egyptians (the identity of which has long been disputed); and there is every reason to believe it to be the species of which the Mummies, in the bird pits at Saccarra, are composed.

It has been examined at the house of Sir Joseph Banks with the most perfect Mummy known, in which the feathers are still entire, and the result left no doubt on the minds of the Gentlemen present, of its being the true species of Ibis, held sacred and preserved by the antient Egyptians. *See the Mummy near it.*

The *Glossy Ibis* (T. Igneus).

This was lately killed in Wales. It was likewise shot a few years since in Lancashire.

Egyptian Ibis (T. Ibis).

This large species is what most naturalists have considered as the sacred; but on examination with those Mummies that have come under my observation, I find it much longer, and the bill very different from any of them.

Scarlet Ibis (Tantalus Ruber).

Inhabits the borders of the great lakes and rivers of South America. The colour of the whole bird,

Glossy Ibis
Pub. by W. Bullock, London Museum Piccadilly April 12 1812.

except the tips of its wings, which are black, is bright scarlet. It feeds on small insects and crabs, and will breed in a domestic state.

Brown Ibis (T. Fuscus).

Black-faced Ibis (T. Melanopis).

CURLEWS (SCOLOPAX).

Common Curlews (Scolopax Arquata), with its nest and eggs, taken on the moors between Edinburgh and the falls of the Clyde.

The young one was kept alive for some time; its food was small pieces of raw flesh; the bill, at their exclusion, is little larger than our domestic fowls, and it is not till the bird is nearly at its growth that it attains any considerable length.

In this Case are a number of the *Scolopax* genus, some of which are rare.

Sand-pipers (Tringa). Many of these are natives of our own shores, where they run in quest of their food with amazing celerity, uttering at the same time a sharp, shrill cry,—whence their name.

Amongst the most remarkable is the

Ruff (T. Pugnox). Its British name is taken from the remarkable feathers that stand upon its neck and shoulder. They are taken in large quantities in the

spring, in the fens of Lincolnshire, and fattened on bread and milk for the London markets: owing to the strong propensity of the males to fighting, they are obliged to be kept in the dark.

Grey Phalarope (T. Lobata).

Red Phalarope (T. Hyperborea).

Little Sand-piper (T. Pusilla). The three last are among the most rare of the British birds.

In this Case are likewise the *Avocettas* (Recurvirostra) and two species of *Oyster Catchers* (Hematopus).

PLOVER (CHARADRIUS).

A number of rare, and several new species of this genus of Birds are in this Case: those known are labelled.

PARRA (JACCANA).

In this Case are several species of these birds, remarkable for the extreme size of their feet, and the sharp spurs with which the shoulders of some of

them are armed. They are natives of the warmer parts of India, Africa, and America, and in their manner much resemble the Rail, of which there are several in the same Case.

BUSTARD (OTIS).

The *Great Bustard* (Otis Tarda) is the largest of our land birds, weighs 25lb.; is now become exceeding rare, and will probably, in a few years, be lost to our country, owing to its size, and the avidity with which it is sought after, as well as to the circumstance of many of its former haunts being inclosed.

Little Bustard (Otis Tetrax).

This rare species of British bird was lately killed in Berkshire. It is a female, the other sex being very seldom met with in this country.

Near these are a pair of *Nondescript Bustards;* lately presented by Major Johnson, of Calcutta.

OSTRICH (STRUTHIO).

Black Ostrich (S. Camelus).

A young specimen not having attained its complete plumage. In the Menagerie of Mr. Polito, at Exeter 'Change, is now living a most superb bird of this kind, perhaps the finest ever brought to Europe; it reaches 11 feet in height.

Cassowary (Scolopax Casuarius).

Fine specimen of the male and female of this highly curious bird.

Great Emea, or *New Holland Cassowary* (S. Nova Hollandia), upwards of 7 feet high.

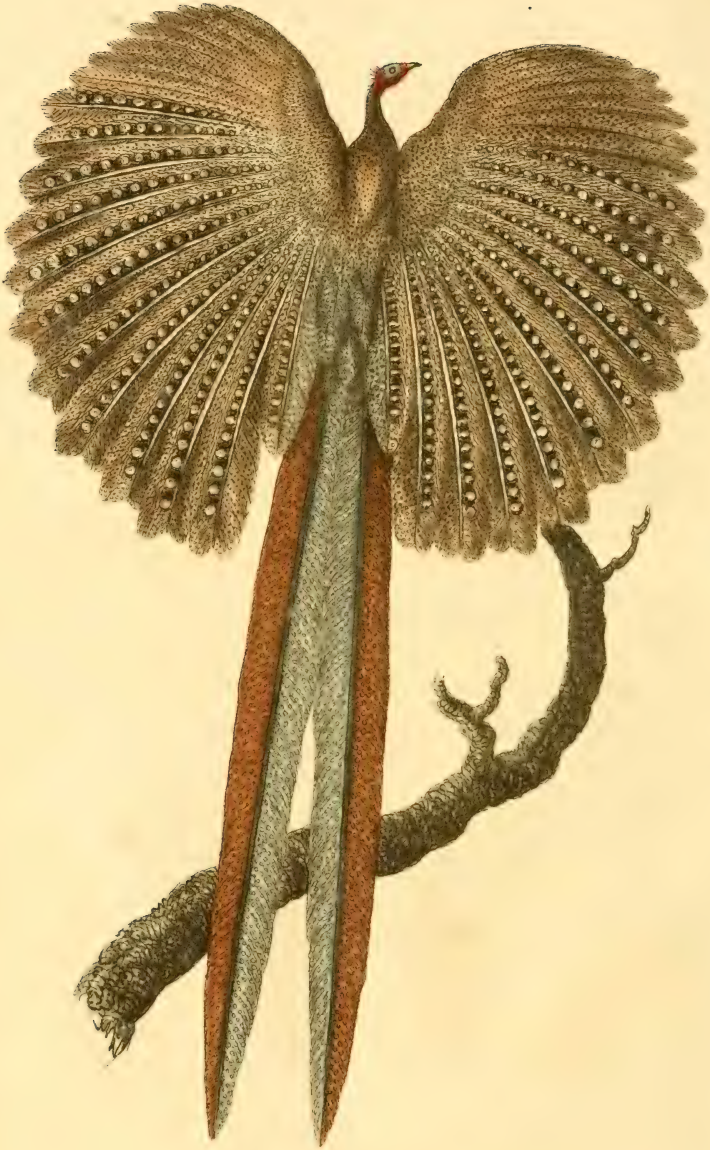
Lesser Emea, not half the size of the above, and a distinct species.

American, or *Three-toed Ostrich* (S. Rhea).

CURASSOWS (CRAX).

Crested Curassows (Crax Alector). Male and female.

Inhabits Surinam and other warm parts of South America; its size is nearly that of a turkey; the male is black, but in the female the feathers of the head and neck are black and white, and the whole of the body is a rich mixture of fine cream-colour and black; the head is ornamented with an erect crest, each feather being bent a little forward, which gives the bird a very majestic appearance. They are domesticated in South America, and are said to be excellent food.



Argus Pheasant.

Lith. by Howitt

Pub. by W. Bullock, London Museum Piccadilly, April 12th 1812.

PHEASANTS (PHASIANUS).

Argus Pheasant, or *Luen* (Phasianus Argus).

This superb and majestic bird was first described by Edwards, in the 55th volume of the Philosophical Transactions, who says, "It is the largest of "the pheasant genus yet known, being in size equal "to a full-grown turkey." The wings and tail are besprinkled with a multitude of round spots like eyes; whence it has received the name of *Argus*. The feathers in the middle of the tail are very long, and project much beyond the rest. (A much longer, and equally beautiful feather, of an unknown species of Chinese Pheasant, five feet long, is in the same Case.) Its head is covered with a double crest. It has been doubted whether this bird had not originally more than two long tail-feathers; this, however, on examination of the rump, seems never to have been the case. Mr. Pennant describes it as having spurs like the common cock, but this also appears to be an error; for this bird, although a male, and of full growth, has not the slightest appearance of them.—This extraordinary bird, with its wings extended, measures eighteen feet in circumference. It is a native of the North of China.

Golden Pheasant of China (Phasianus Pictus).

Of the brilliancy with which nature so often decorates the feathered tribe, the Golden Pheasant is one of the most striking examples; a bird of which the colours are so powerfully lucid, as to dazzle in a full light the eyes of the spectator, and can only be exceeded by the polished lustre of the Humming-bird:

even the Peacock himself, with all his gaudy plumage, falls short in the comparison. This splendid bird is now bred in this country, and will stand our winters tolerably well.

The female was presented to the Museum by her Majesty.

The *Ringed Pheasant* (P. Colchicus var.)—Presented by the Bishop of Salisbury.

A pair of *Bohemian Pheasants,* presented by Lady Reade, who was the first person that succeeded in breeding this species in England.

Wild Cock of India, or *Jungle Cock* (Phasianus varius).

This beautiful bird is supposed to be the parent, or original stock of all the varieties of our domestic poultry.

African Pheasant (P. Africanus).

Crested Pheasant (P. Cristatus).

A beautiful pair of *Silver Pheasants* (P. Nycthemerus). Presented by the Bishop of Durham.

White Guinea Fowl (Numidia Meliagris, var.) Received from Russia.

WOOD GROUSE, OR CAPERCAILE

(Tetrao Urogallus).

The male of this noble species of Game is nearly as large as a turkey, but the female is considerably smaller. They were formerly found in Ireland and

Scotland, but are now believed to be extinct, as I hear of no authentic account of any having been met with for several years.

They are now found in various parts of the Old Continent, principally in the northern, in the large pine forests; and many of them are sent every winter from Sweden to London, and used at the tables of the great, being by many considered a luxury, although they are said to taste strong of the pine buds on which they feed.

BRITISH GAME.

Pair of *Red Grouse* (Tetrao Scoticus).

Pair of the *Black Grouse* (Tetrao Tetrix).

Pair of the *Ptarmigan* (Tetrao Lagopus).

The *White Hare* (Lepus Variabilis).

This species are found on the northern hills of Europe, Asia, and America, from whence in the winter they migrate to the plains in troops, and return in spring. The limbs and tail are shorter than the common hare: they change from a reddish grey to white in the winter, except the tips of the ears, which are black.

PARTRIDGES, No. 3 (TETRAO).

A great variety of the birds of this genus from all parts of the world are contained in this Case, many of them extremely rare, and some new among them are the *Spotted Grouse* (Tetra Canadensis). Male and female.

Pinnated Grouse (Tetrao Cupido).

Hazel Grouse, Male and female (Tetrao Bonafia).

Red Legged Partridge (Tetrao Rufus).

Pearl Partridges, Male and female (Tetrao Perlatus).

Senegal Partridges (Tetrao Bicalcaratus).

Maryland Quail (Tetrao Marilandus).

Crested Quail (Tetrao Cristatus).

And the *Common Quail* (Tetrao Coturnix).

The *Common Partridge,* and Young, beautifully preserved, under a large glass shade.

PIGEONS (COLUMBA).

In this Case are a great variety of the *Pigeons* and *Doves* from almost every part of the world, with

their names affixed to them. Among the most remarkable, is the

Crowned Pigeon (Columba Coronata).

The gigantic size of this species, which is not far short of a turkey, has caused some naturalists to place it rather among the gallinaceous tribe than in the genus Columba. Its characters are however so clearly and decisively marked, as to declare at once its proper genus. It is undoubtedly one of the most elegant of birds, and is a native of the Molucca Islands. Its voice resembles that of the Wood Pigeon, but in so loud and hoarse a tone, that it is recorded of some of Mons. Bougainville's sailors, that they were greatly alarmed on hearing it for the first time in the unfrequented spots of some islands on which they landed; supposing it to have proceeded from the savage cries of hostile and concealed natives. This bird is frequently brought to Europe alive, and is considered as one of the greatest ornaments of the menagerie. The above bird was presented to the Proprietor, with other articles, by her Royal Highness the Princess Charlotte of Wales.

The *Bronzed-winged Pigeon* (C. Chalcoptera).

Is a beautiful species, inhabiting New Holland; the covert of its wings exhibiting all the prismatic colours on a metallic ground.

The beautiful *White Fan-tailed Dove* was presented by her Majesty, who received it from Walcheren.

Larks (Alauda) and *Starlings* (Sternus).

The birds of these families are not so numerous as many of the smaller kinds. In this Case all that have been collected are properly named.

THRUSHES (TURDUS),

AND

CHATTERERS (AMPELIS).

This Case contains about 40 species of the *Thrushes* and *Chatterers*. The first are not remarkable in general for the splendour of plumage, though some strong exceptions will be observed in this collection; but the richness of their melody makes ample amends. One species, the *Mocking Bird* of America (Turdus Polyglottus), deserves particular notice; without any exterior attractions, it possesses faculties which render it one of the greatest objects of curiosity and admiration among the feathered tribes. It is about the size of a Thrush. Its natural notes are musical and solemn; but it likewise possesses the singular power of assuming the tones of every other animal, whether quadruped or bird. It seems to divert itself with alternately alluring or terrifying other birds, and to sport with their hopes and their fears. Sometimes it entices them with the call of their mates, and on their approach terrifies them with the scream of the eagle, or some other bird of prey. It frequents the habitations of mankind, and is easily domesticated; it builds its nest in the fruit trees, near the houses of the planters; and sitting sometimes most of the night on the

tops of their chimnies, assumes its own native melody, and pours forth the sweetest and most varied strains. The savages call it *Cencontlatolli,* or Four Hundred Languages. It is found in Carolina, Jamaica, New Spain, &c. In Jamaica, it is very common in the Savannahs, where it perches on the highest tree to chaunt its song.

The *Glossy Thrush* (T. Æneus.)
Is a magnificent species, near 18 inches long, of the most shining and vivid colour, which changes as seen in different lights.

The *Chatterers* are mostly natives of South America, and remarkable for the rich and varied tints of their feathers.

GROSBEAK (LOXIA),

AND

BUNTINGS (EMBERIZA).

About seventy birds of the above species are collected together in this Case, all properly named. The *Grosbeaks* feed principally on hard seeds, which their strong bills enable them easily to open. Many of them are inhabitants of the cold parts of Europe and America.

The *Buntings* are likewise seed birds, and have a tooth-like process in the upper mandible, which enables them to split their food with great facility. In this genus are included the several species of *Whidah Birds*, remarkable for their elegance and great length of tail.

TANGER (TANAGRA),

AND

FINCHES (FRINGILLA).

About eighty of these are contained in this Case. The *Tanagers* are mostly natives of South America, and no family of birds exhibit a greater diversity of splendid colours. They, as well as the Finches, feed on grain and seed, and are often troublesome and destructive to the plantations, in whose neighbourhood they abound. Many of these are not yet described.

FLY-CATCHERS (MUSCICAPA).

The birds of this genus are perhaps more universally dispersed over every part of the globe than any other. Their food is entirely insects, which, but for

1 Whidah Bunting. 2 Shaft tailed Bunting.

Pub.d by W.Bullock, London Museum Piccadilly April 1.1812.

the multitudes that are consumed by them, would render some countries unfit for human residence: about one hundred species are described.

WARBLERS (MOTACILLA).

This genus is more numerous than any other of birds. Dr. Latham, in his excellent work, "The general Synopsis of Birds," describes one hundred and ninety-eight species. The major part of them inhabit the warmer countries, where insects, their proper food, abound. They are in general not remarkable for gaiety of plumage, but their melody amply compensates for their deficiency in that respect.

The *Nightingale* (Motacilla Luscina), though common in this country, never visits the northern parts of our island, and is seldom seen but in the neighbourhood of London and the western counties. The following description of the varied song of this unrivalled bird, is taken from the ingenious author of the *Histoire des Oiseaux:* — "The leader of the vernal "chorus begins with a low and timid voice, and he "prepares for the hymn to nature by essaying his "powers and attuning his organs; by degrees the "sound opens and swells, it bursts with loud and "vivid flashes, it flows with smooth volubility, it "faints and murmurs, it shakes with rapid and vio-"lent articulations; the soft breathings of love and

" joy are poured from its inmost soul, and every " heart beats in unison and melts with delicious " languor. But this continued richness might satiate " the ear; the strains are at times relieved by " pauses, which bestow dignity and elevation. The " mild silence of evening heightens the general " effect, and not a rival interrupts the solemn scene." They begin to build in May.

MANAKIN, TITMICE, AND SWALLOWS.

(Pipra). *(Parus).* *(Hirundo).*

The *Manakins,* at first sight, resemble the next genus, or *Titmice.* They are mostly natives of South America, and are in general beautiful in their colours. The most remarkable species is the *Cock of the Rock,* or *Crested Manakin* (Pipra Rupicola). Though this bird is of an uniform orange colour, it is one of the most beautiful of South America. They are found in great numbers on the mountain Luca, near Oyapoc, and on the mountain Courouaye, near the river Aprouack. They are esteemed for the sake of their plumage, and are very scarce and dear; because the savages, either from superstition or fear, will not venture into the dark caverns where they lodge.

The *Titmice* are a very active and fertile race, laying from eighteen to twenty eggs at one hatch. They feed on fruit, seeds, and insects, and a few on flesh; most of them are fond of the brains of other birds, which they get at by cleaving the skull of such as they find dead. Several are natives of Britain, and are an extremely entertaining bird in captivity, but are dangerous to introduce into an aviary, on account of their cruelty and boldness.

The natural history of the *Swallow* is extremely interesting, and has been the cause of much controversy among authors; but we are still in much doubt respecting their manners and habits. A few species visit this country in the summer, and skim over moist and wet places in search of insects, which they dexterously take on the wing.

GOATSUCKERS (CAPRIMULGUS).

The birds of this family (the last in the Linnæan arrangement) have their mouths of extraordinary size, opening far beyond the eyes, which enable them to take large insects on the wing. They seldom appear in the day time, except when disturbed, or in dark cloudy weather. They lay two eggs, which they deposit on the naked ground. The voice of the European one resembles the noise made by a large spinning wheel.

Among a number of these birds, is that highly curious species the Sierra Leone Goatsucker (Caprimulgus Longipenis), presented by A. Haworth, Esq. of Chelsea.

Birds in separate Cases, not numbered, but each having a reference to the Page in this Catalogue, in which they are described.

Northern Divers (Colymbus Glacialis). Male and female.

The largest of the Divers measures three feet and a half in length. It is sometimes shot on our coast.

Horned Screamer (Palameda Cornuta).

This extraordinary bird is of the size of a large turkey: from the front of the head rises a sharp horn, about four inches long, and each joint of the wings is furnished with an extremely strong spur, triangular and very sharp; those on the shoulder being nearly as large as a man's finger: they inhabit the fens of South America, and are always found in pairs, feeding on seeds and reptiles. The female makes a nest on the ground, of mud, shaped like an oven, and lays two eggs.

White-bellied Boat-bill (Cancroma Cancrophaga).

The bill of this bird, in shape, resembles the bottom of a boat with the keel upwards. It is a native of South America; perches on trees which overhang the water, and darts down on the fish as they swim underneath.

Barbary Partridges, male and female (Tetrao Rufus).

Beautifully preserved, and placed under a glass shade on an elegant bronze tripod; presented by her Majesty.

AMPHIBIOUS ANIMALS.

"Were ev'ry falt'ring tongue of man,
"Almighty Father! silent in thy praise,
"Thy works themselves would raise a general voice;
"Even in the depth of solitary woods,
"By human foot untrod, proclaim thy power."

MILTON.

TORTOISE (TESTUDA).

Common Tortoise (Testudo Græca).

This animal is considered as the most common of the European species, and is a native of almost all the countries bordering on the Mediterranean Sea. It lives to a most extraordinary age, instances being adduced of its having considerably exceeded the period of a century.

Geometrical Tortoise (Testudo Geometrica).

From its strong and well contrasted colours, and regularity of pattern, the present species is more readily distinguishable at first view than most others of this perplexing tribe. The native country of this beautiful tortoise is perhaps not truly known; though the shell is more frequently seen in Europe than that of any other kind.

1. Snap. 2. Young Loggerhead Turtle. 3. Variety of the Clore?

Pub. by W. Bullock, London Museum Piccadilly April 1.1812.

Close Tortoise (Testudo Clausa).

The Close Tortoise obtains its name from the unusual manner in which the under part of the shell is applied to the upper, being continued in such a manner round the margin, that when the animal withdraws its head and legs, it is enabled accurately to close all parts of the shell entirely together, so as to be in a complete state of security; and so strong is the defence (says Shaw, in his Zoology) of this little animal, that it is not only uninjured by having a weight of 5 or 600lbs. laid upon it, but can walk in its usual manner beneath the load. It is a native of many parts of North America, being chiefly found in marshy places. It is principally sought for on account of its eggs. It feeds on beetles, mice, and even serpents, which it seizes by the middle, and draws into its shell, and thus crushes them to death.

Concentric Tortoise (Testudo Concentrica).

This species is a native of North America, and is sold in the market of Philadelphia and elsewhere, by the name of *Terrapin*. It is an inhabitant of waters, and is said to be a wholesome and even delicate food. It is also found in Jamaica.

Snap or *Snake Tortoise* (Testudo Serpentina).

This species, first described by Linnæus, appears to have been obscurely known. It is a native of North America, where it inhabits stagnant waters, growing to the weight of 15 or 20lbs. and preying on fish, ducklings, &c. Whatever it seizes in its mouth, it holds with great force, and will suffer itself to be raised up by a stick rather than quit its hold. This animal conceals itself in muddy waters, in such a manner as to leave out only part of its back, like a stone or other inanimate object, by which means it the

more easily obtains its prey. In New York, it is called the Snapping Tortoise.

It was kept alive in the Museum upwards of eight months, during which time it never tasted food. It possessed a most amazing strength, carrying 200lbs. without any apparent inconvenience. Its disposition was exceedingly fierce.

Logger-head Turtle (Testudo Caretta).

This Turtle exceeds in size every other known species. It inhabits the same seas with the Green Turtle, but is also diffused into very remote latitudes, being often found in the Mediterranean, and about the coasts of Italy and Sicily. In a commercial view, it is of little value; the flesh being coarse and rank, and the plates of the shell being too thin to be of use. It is a strong, fierce, and even dangerous animal.

Several Tortoises, unknown.

The *Indian Tortoise* (Testudo Indica).

This is the largest known species of the Land Tortoise, the shell being upwards of three feet long, and six feet in circumference. In this specimen the tubercles on the fore part of the shell are wholly wanting.

The *Fimbriated Tortoise* (Testudo Fimbriati).

This is one of the larger species, and most extraordinary in its appearance: it inhabits the rivers of Cayenne and Guiana.

LIZARDS (LACERTA).

This Case contains fifty-one species of *Lizards*, beautifully preserved, and displayed on an artificial rock, so as to exhibit them in their various attitudes, and convey an idea of their haunts and mode of life: the greater part of them being named, we shall only mention those whose history and habits are known and remarkable.

Two specimens of the *Flying Dragon* (Draco Volans).

This very extraordinary species of Lizard is a native of Asia and Africa. "The very name (says "Dr. Shaw) conveys to the mass of mankind the "idea of some formidable monster, and recalls to the "imagination the wild fictions of romance and poe-"try; but the animal distinguished by that title in "modern natural history, is a small, harmless Li-"zard." It is about ten inches long, and furnished with large expansible wing-like membranes, which enable it to spring to a considerable distance in quest of its prey; it has a pouch under the throat of a singular appearance, and is altogether different from every other creature.

A young *Crocodile* (Lacerta Crocodilus).

This sometimes attains the length of 25 to 30 feet, and is of great swiftness, voracity, and strength, roars hideously, and devours men, and other large animals.

A *Crocodile* from the Island of St. Thomas, differing considerably from the common one.

The *Gangetic Crocodile* (Lacerta Gangetica).

A very young specimen; grows to the length of 30 feet.

The *Alligator* (Lacerta Alligator).

This animal bears so near a resemblance to the Crocodile, that many naturalists have considered it as a mere variety, rather than a distinct species.—Catesby says, the largest and greatest number of Alligators inhabit the Torrid Zone. They frequent not only the salt rivers near the sea, but streams of fresh water in the upper parts of the country, where they lie lurking among the reeds to surprise cattle and other animals. In Jamaica, and many parts of the Continent, they are found about twenty feet in length. They cannot be more terrible in their aspect than they are formidable and mischievous in their nature, sparing neither man nor beast they can surprise, pulling them down under water to drown them, that they may with greater facility and without struggle or resistance devour them. As quadrupeds do not often come in their way, they almost always subsist on fish. This destructive monster can neither swim nor run any way than straight forward, and is consequently disabled from turning with that agility requisite to catch his prey by pursuit; therefore they do it by surprise in the water as well as by land. The Alligator is supposed to be a long-lived animal, and its growth is extremely slow.

Dragon Lizard (Lacerta Dracana).

Is a native of South America, and measures two feet four inches in length; it is a harmless animal,

Crocodile of the West Indies.

Pub.by W.Bullock, London Museum Piccadilly April 1.1812.

1 Chamaleon . 2 . American . Iguana . 3 Variety of the Common Lizard.

Pub.by W.Bullock, London Museum Piccadilly April 1.1812.

and much esteemed as an article of food, though to persons unaccustomed to see it, presents a formidable appearance.

The *Iguana* (Lacerta Iguana).

Though the Lizard tribe affords numerous examples of strange and peculiar forms, yet few species are perhaps more eminent in this respect than the Iguana, which grows to a very considerable size, and is often seen the length of from three to five feet. It is a native of many parts of America and the West India Islands, inhabiting rocky and woody places, and feeds on insects and vegetables; is reckoned excellent food, being exceedingly nourishing and delicate; but observed to disagree with some constitutions. The common manner of catching it is by casting a noose over the head, and thus drawing it from its situation; for it seldom makes an effort to escape, but stands looking intently at its discoverer, inflating the throat at the same time in an extraordinary manner. Iguanas are sometimes salted and barrelled up for use in Jamaica and other West India islands, in considerable quantities; may easily be tamed while young, and in that state is both an innocent and beautiful creature. The larger one in this Case lived some time in the stove of the Liverpool Botanic Garden, but never was observed to take food; but was easily irritated, at which time it puffed up the pouch under the throat in an extraordinary manner; and on the near approach of dogs, to which it seemed to have an aversion, suddenly struck them forcibly with the tail, but was never known to bite.

Several *Chamæleons* (Lacerta Chamæleon).

Few animals have been more celebrated by natural historians than the Chamæleon, which has been

sometimes said to possess the power of changing its colour at pleasure, and of assimilating it to that of any particular object or situation. This, however, must be received with great limitations; the change of colours which this animal exhibits varying in degree, according to circumstances of health, temperature of the weather, and many other causes, and consisting chiefly in a sort of alteration of shades, from the natural greenish or bluish grey of the skin into pale yellowish, with irregular spots or patches of dull red. The Chamæleon is a creature of a harmless nature, and supports itself by feeding on insects, for which purpose the structure of the tongue is finely adapted, consisting of a long missile body, furnished with a dilated and somewhat tubular tip, by means of which the animal seizes insects with great ease, darting out its tongue in the manner of a Woodpecker, and retracting it instantaneously with the prey secured on the tip. It can also support a long abstinence, and hence arose the idea of its being nourished by air alone. Is found in many parts of the world, and particularly in India and Africa, and also in Spain and Portugal. One that was kept alive in Liverpool, was regularly fed with sugar and bread, and appeared to have an affection for the person who had the care of it. Its change of form was as remarkable as that of colour.

LIZARDS (LACERTA), No. 2.

A very fine specimen of the *American Iguana;* presented to the Museum by Lady Cox Hippesley.

The *African Iguana.*

The *Monitor Lizard* (Lacerta Monitor).

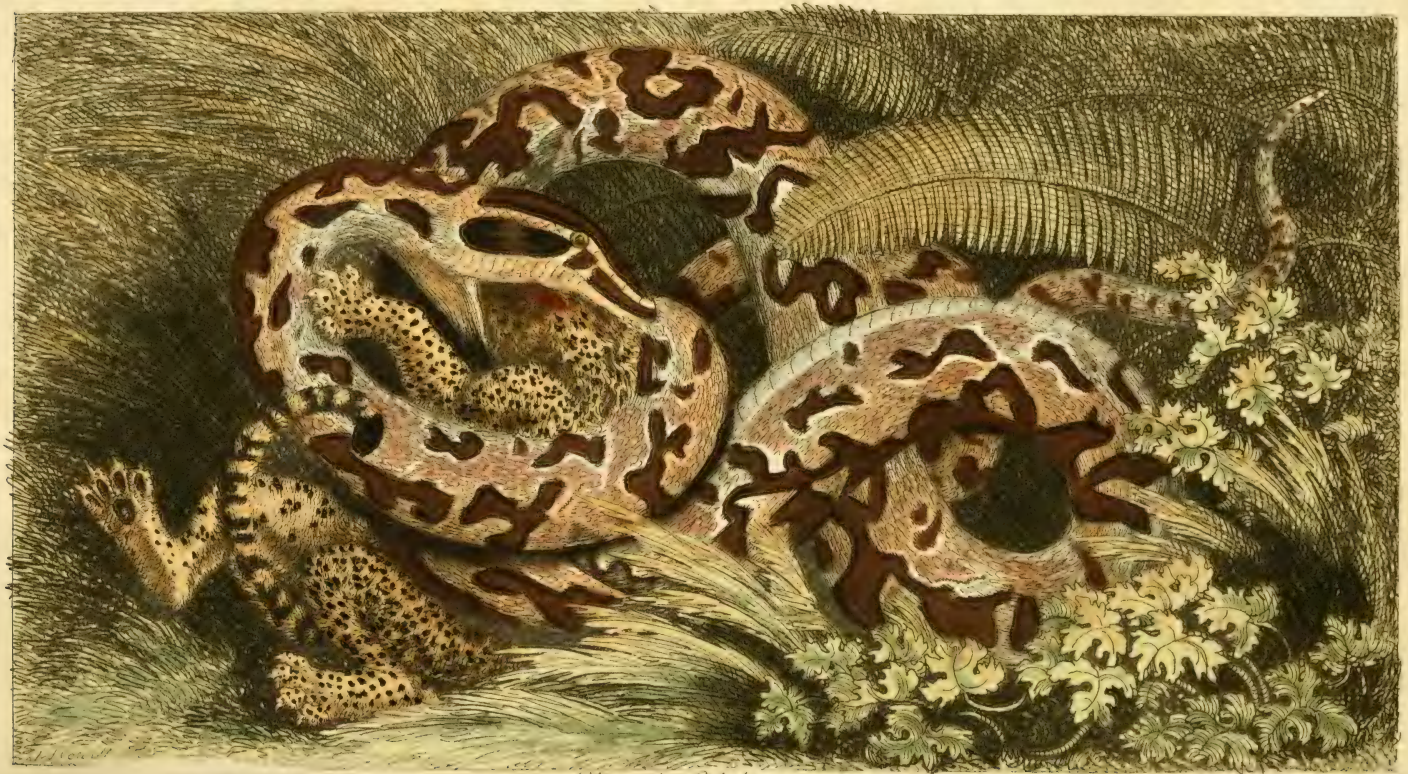
The Monitor Lizard is one of the most beautiful of the whole tribe, and is also one of the largest, sometimes measuring not less than four or five feet from the nose to the tip of the tail. This elegant animal is found with little variation in South America, New Holland, and Africa, where it frequents woody and watery places; and if credit may be given to the reports of some authors, is of a disposition as gentle as its appearance is beautiful. It has gained the name of Monitor, from its supposed attachment to the human race, and has been said that it warns mankind of the approach of the Alligator, by a loud and shrill whistle.

The *Galliwasp* (Lacerta Occidua).

The Galliwasp is a native of the American Islands, and seems to be particularly common in Jamaica, where it is said to frequent woody and marshy districts. The Galliwasp (according to Brown, in his Natural History of Jamaica) is reckoned the most venomous reptile in that island, and it is said that no creature can recover from its bite: but this he very properly considers merely a popular error. This animal is not noticed by Linnæus.

The *Great Boa* (Boa Constrictor).

By those who are unacquainted with the wonders of nature, the descriptions given by naturalists of some of the more striking and singular animals are received with a degree of scepticism, or even rejected, as exceeding the bounds of credibility. Amongst these animals may be numbered the prodigious serpents which are sometimes found in India, Africa, and America; serpents of so great a size as to be able to gorge even some of the largest quadrupeds, and of so enormous a length as to measure upwards of thirty feet. There is reason to believe, that these immense serpents are become less common than they were some centuries back; and that in proportion as cultivation and population have increased, the larger species of noxious animals have been expelled from the haunts of mankind. They are, however, occasionally seen, and sometimes approach the plantations nearest to their residence. It is happy for mankind that these serpents are not poisonous; they are therefore to be dreaded only on account of their size and strength, which latter is so great as to enable them to kill cattle, deer, and other animals, by writhing themselves round them, so as to crush them to death by mere pressure; after which they swallow them in a very gradual manner; and when thus gorged with their prey, grow almost torpid with repletion: and if discovered in this state, may without difficulty be dispatched.—These enormous serpents are natives of Africa, India, the Indian Islands, and South America, where they inhabit marshy and woody places. There are several species of the Boa in this collection, one of which is considered by naturalists, in respect to



Pub.ly W.Bullock London

Gigantic Coluber crushing a Panther

Museum Piccadilly April 1.1812

beauty of colour, size, or preservation, to be the finest specimen ever brought into this country; measuring thirty-two feet in length, and two feet seven inches in circumference, and is preserved in the act of destroying a deer, which is crushed, and expiring in the enormous folds of its merciless enemy.

[I have retained the generic name of Boa; but on examination of all the species that I have seen, they prove to belong to the Genus Coluber.]

SERPENTS (SERPENTES).

This Case contains thirty-seven different *Serpents*, finely prepared, and exhibited in their natural positions, with the English and Linnæan names attached to them.

Serpents, No. 2.

A young specimen of the *Boa Constrictor.*

Striped Rattle Snake (Crotalus Durissus).

The Rattle Snake is the most poisonous of reptiles that inhabit America. The most conspicuous distinction this animal bears from all other of its species, is the rattle, which makes so loud a noise while

the creature is in motion, that its approach may be known, and danger avoided. Many naturalists are of opinion, that this Snake acquires an additional bone to the rattle every year; from the number of which bones, the precise age of the Snake may be known. Catesby, in his History of Carolina, says, "the "Rattle Snake is the most inactive and sluggish of "animals, and is never the aggressor, except upon "what he preys; for unless disturbed he never bites, "and when provoked gives warning by shaking "his rattles, so that a person has time to es- "cape." It is said that this Snake has the power of charming or fascinating small animals within reach, which it devours. Squirrels and birds are its principal prey, and no sooner do they spy the Snake than they skip from bough to bough, and approach by degrees nearer to the enemy, regardless of any danger, until they enter the extended jaws that are open to seal their ruin. Bartram observes, that some Indian nations never kill the Rattle Snake, or any other species, alleging as their motive, that it would influence its living kindred to revenge the injury or violence done to it when alive. The flesh of the Rattle Snake is said to be much relished, even by Europeans.

Spectacle Snake, or *Cobra de Capello* (Coluber Naja).

The Coluber Naja, or Cobra de Capello, is a native of India, where it appears to be one of the most common, as well as the most noxious of the serpent tribe; very frequently proving fatal in the space of a few minutes to those who unfortunately experience its bite. In India it is exhibited as a shew, and is of course more universally known in that country than almost any other of the race of reptiles. It is carried

about in a covered basket, and managed by the proprietors in such a manner, as to assume a dancing motion at the sound of a musical instrument. The Indian jugglers, who thus exhibit the animal, deprive it of its fangs, by which they are secured from its bite.

FISHES.

See thro' this air, this ocean, and this earth,
All matter quick, and bursting into birth;
Above how high progressive life may go,
Around how wide, how deep extend below!
Vast chain of being, which from God began,
Nature's ethereal, human, angel, man,
Beast, bird, fish, insect, what no eye can see,
No glass can reach; from infinite to Thee,
From Thee to nothing!

Coryphene, or *Dolphin* (Coryphæna Hippuris).

The Dolphin is an inhabitant of the Mediterranean, Indian, and Atlantic seas, where it often appears in large shoals, and is sometimes observed to follow ships, devouring with avidity any occasional article of food which may happen to be thrown overboard; it will even swallow substances of a different nature: and we are informed, from the authority of Plumier, that in the stomach of one which he examined, were found four iron nails, one of which measured more than five inches. When taken out of the water, the beautiful colours (with which the fish is decorated when living) fade as it expires; the lustre vanishing by degrees, till at length it becomes of

1. Flying Gurnard. 2 Beaked . Angler.

3 Porcupine Diodon . 4 Hare mouthed Globe Fish . 5 Triangular trunk fish.

Pubd by W. Bullock London Museum Piccadilly April 1 1812.

a dull grey colour. This gradual evanescence of colour in the dying Coryphene is contemplated by sailors with as much delight as the Romans are said to have exhibited on viewing similar changes in the expiring Mullet, when brought to their tables before the feast began. The Coryphene is a strong and vigorous fish, and swims with great rapidity. It is perpetually engaged in the pursuit of smaller fishes, and is considered as one of the most cruel persecutors of the Flying Fish. The flesh is said to be excellent.

Flying Gurnard (Trigla Volitans).

This highly singular and beautiful species is a native of the Mediterranean, Atlantic, and Indian seas, where it swims in shoals, and is often seen flying out of the water, in the same manner as the Flying Fish *Exocœtus.* In its native element, the colours of this fish are extremely brilliant. It is crimson above; pale, or of a white colour underneath. The pectoral fins are extremely large, transparent, of an olive green, richly varied with numerous bright blue spots. The tail is pale violet, with the rays crossed by dusky spots, and strengthened on each side the base by two obliquely transverse bony ribs or bars.

Small *Saw Fish* (Pristis Antiquorum).

The Saw Fish is a species of Shark, growing to the length of fifteen feet or more; is an inhabitant of the Mediterranean and Northern seas, and was known to the ancient writers by the name of *Pristis.*

Striped Chætodon (Chætodon Striatus).

This fish is a native of the Indian and American seas.

Sparrus. Unknown.

Porcupine Fish (Diodon Hystrix).

In point of habit or external appearance, the remarkable genus Diodon may be said to connect in some degree the tribe of fishes with that of the spiny quadrupeds, such as the porcupines and hedge-hogs; it is also allied in a similar manner to the *Echini*, or Sea Urchins. The Diodon Hystrix, commonly termed the Sea Porcupine, is said to afford an amusing sight when taken by a line and hook, baited by a species of crab: after seizing the bait, by a sudden spring, on finding itself hooked, it exhibits every appearance of violent rage, inflating its body, and elevating its spines to the highest possible degree, as if endeavouring to wound in all directions; till after having tired itself by its vain efforts, it suddenly expels the air from its body, and becomes flaccid for some time: but when drawn towards the shore, redoubles its rage, and again inflates its body; in this state it is left on the sand, it being impossible to touch it without danger till it is dead. It is a native of the Indian and American seas, and is considered as a coarse fish, but is sometimes eaten by the inhabitants of the West Indian Islands.

Lophius.—Unknown.

Torpedo Ray (Raja Torpedo).

The Torpedo has been celebrated both by ancients and moderns, for its wonderful faculty of causing a numbness or painful sensation in the limbs of those who touch or handle it. The shock or sensation given by this Ray is attended with all the effects of that produced by the electrical machine, so far as experiment has hitherto enabled us to discover. Although this fish does not appear to be furnished with any striking exterior qualities; although it has no muscles formed for great exertions, nor any internal

conformation differing from the Ray kind; yet such are the wonderful powers it possesses, that in an instant it can paralyse the hand or body that touches it, and cause for a while a total suspension of the mental faculties. Reaumer has by several experiments attempted to demonstrate, that it is not necessarily, but by a voluntary effort, that the Torpedo benumbs the hand that touches it. On every trial he could readily perceive when it intended to give the stroke, and when it was about to continue inoffensive. In preparing to give the shock, it flattened its back, raised its head and tail, and then, by a violent contraction in the opposite direction, struck with its back against the finger that touched it; and its body, which before was flat, became round and lumped. It is said, that the negroes can handle the Torpedo without being affected; and we are told the whole secret of securing themselves from its bite consists in keeping respiration suspended at the time. The electrical power, however, is known to terminate with the life of the animal, and when dead, it is handled or eaten with perfect safety. It is an inhabitant of the Northern, European, and the Mediterranean seas.

Sea Horse (Syngathus Hippocampus).

The Hippocampus is a fish of a highly singular appearance. In its dry or contracted state, this animal exhibits the fancied resemblance from which it takes its name; but in the living fish, this appearance is somewhat less striking, the head and tail being carried nearly straight. It is a native of the Mediterranean, Northern, and Atlantic seas. A finer specimen of this species of Pipe-fish is in another place, under a glass; and one of a more curious form, the Foliated Pipe-fish.

Five-rayed Star-fish (Asterias Lavigata).

Carved Asterias (Asterias Toreuma).
Is a native of the Indian seas, and is found of various sizes, from one to six inches in diameter.

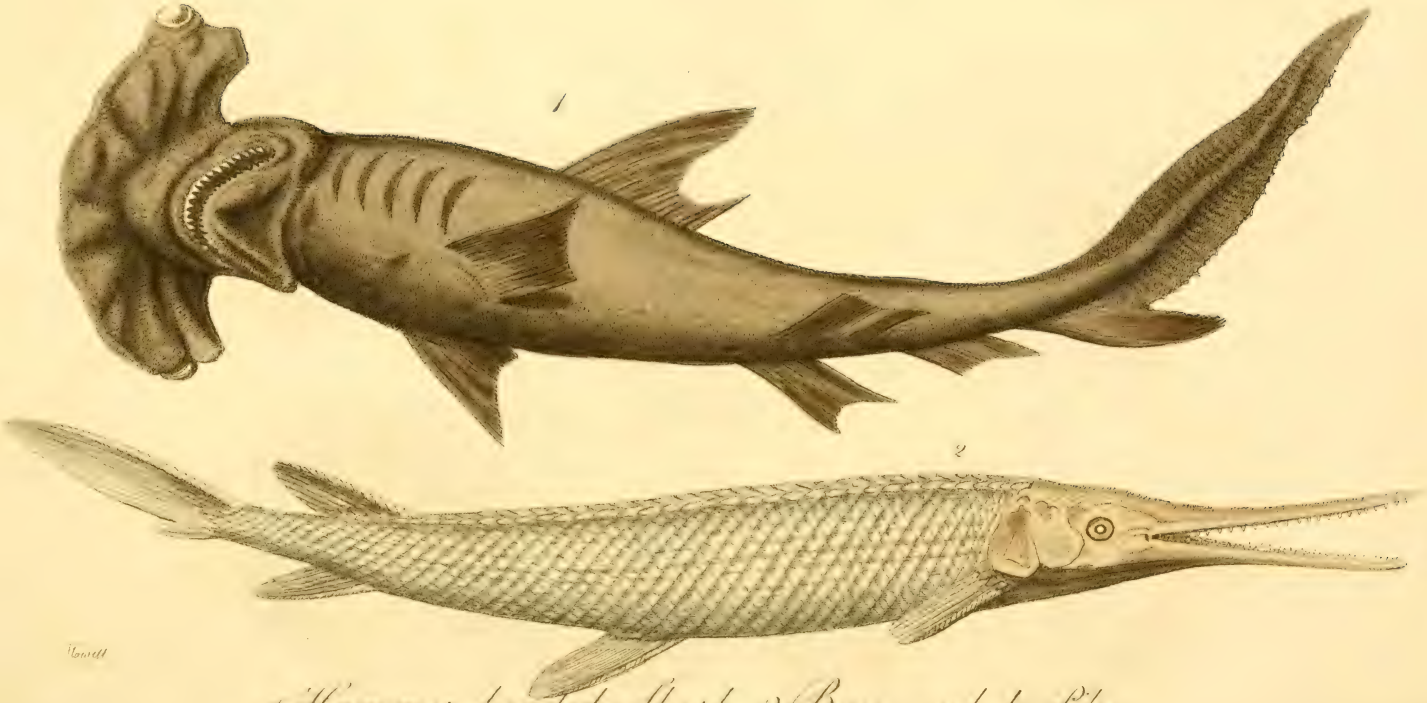
Enormous *Crab's Claw,* measuring in the broadest part upwards of ten inches in circumference.

FISH.

Long-finned Chætodon (Chætodon Teira).
This curious fish is a native of the Indian and Arabian seas, and is said to arrive at a considerable size.

Harlequin Angler (Lophius Histrio).
This species is a native of the Indian and American seas, growing to the length of ten or twelve inches, and in manners resembles the European Angler. Monsieur Renard, in his History of Fishes, affirms, that he knew an instance of an individual of this species kept for three days out of water, and which walked about the house in the manner of a dog.

Young *Frog-fish,* or *Angler* (Lophius Europæus).
The Frog-fish is remarkable for its uncouth appearance. The one under consideration is an inhabitant of the European seas, where it sometimes



1. Hammer headed Shark. 2. Bony scaled Pike.

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arrives at a great size. It is observed to frequent shallow parts of the sea, lying in ambush, covered with weeds and mud, in such a manner, that the smaller fishes, deceived by its tentacula, or long processes on the head, by their resemblance to worms, on attempting to seize them become a prey to the Lophius.

Beaked Angler, or *Bat-fish* (Lophius Rostratus).
A native of South America; it preys upon small fishes and worms.

Remora, or *Sucking-fish* (Echeneis Remora).
This fish has the power of adhering to whatever it comes in contact with, in the same manner as a cupping glass adheres to the human body. It is by such an apparatus that this fish sticks to the body of a shark, drains away its moisture, and produces a gradual decay. It is found principally in the Mediterranean and Atlantic seas, where it grows to the length of about eighteen inches.

The *Bony-scaled Pike* (Esox Osseus).
This is a fish of considerable size, and of very remarkable appearance, being covered with strong bony scales, disposed in long oblique rows, which give it the appearance of being carved out of a solid piece of ivory. It is a native of the fresh water lakes and rivers of America, and the flesh is said to be excellent.

Lump Sucker (Cyclopterus Lumpus).

Pavonian Sucker (Cyclopterus Pavonius).
This beautiful fish was caught in the river Mersey, near Liverpool.

Armed Loricaria (Loricaria Catafracta). Found in the American seas.

Yellow Loricaria (Loricaria Flava).

FISH.

Slender Fistularia, or *Trumpet-fish* (Fistularia Tabacaria).

This very remarkable fish is a native of the American seas, and subsists on the smaller fishes, sea-insects, and worms.

Oceanic Flying-fish (Exocætus Evolans).

The fishes of this genus, which are few in number, are remarkable for the extreme length and size of their pectoral fins, by which they are enabled to spring from the water, and support a kind of temporary flight or continued motion through the air, to the distance of 2 or 300 feet; when the fins become dry, they are obliged to commit themselves to their own element. The fish here described is an inhabitant of the American and Indian seas, and is occasionally observed in the Mediterranean. Pennant records an instance of its being seen about the British coasts. The celebrated Bonnet considered this species of fish as forming a kind of connecting link between fishes and birds, similar to that which bats may be supposed to form between birds and quadrupeds.

Lasher Bullhead (Cottus Scorpius).

This fish is an inhabitant of the Mediterranean and Northern seas; is said to be plentiful about the coast of Greenland, where it is esteemed good food. It is a strong fish, swimming with rapidity, and preying on smaller fishes; and is said to live a considerable time out of the water, having a power of closing the gill covers in such a manner as to exclude the effect of the atmospheric air. When caught, if held in the hand, it emits a strong and peculiar sound by the expulsion of air through its mouth; during this action the mouth is opened to the utmost width, the pectoral fins are strongly expanded, and the whole body is agitated by a vibrating or tremulous motion.

Hare-mouth Globe-Fish (Tetrodon Lagocephalus).

This genus, like the Diodon, has the power of inflating its body at pleasure. Is an inhabitant of the Indian and American seas, but occasionally strays into the northern latitudes, and has been taken, according to Pennant, about the British coasts, near Penzance in Cornwall.

Round Diodon, Sea Hedge-hog (Diodon Orbicularis).

Lamprey (Petromyzon Marinus).

This fish has long held its place at the tables of the luxurious, having always formed a part of the splendid feasts of our ancient nobility. King Henry I. lost his life by too great an indulgence of this his favourite dish. In the early part of the year they are met with in great numbers in the river Severn, when they are potted in large quantities, and sent to London.

The *Hammer-headed Shark* (Squalus Zygæna).
This is a very voracious and deformed animal, and differs from that of any other known creature; they sometimes attain the length of fifteen feet, and are natives of the Mediterranean and Indian seas.

Angel Fish, or *Shark* (Squalus Squatina).

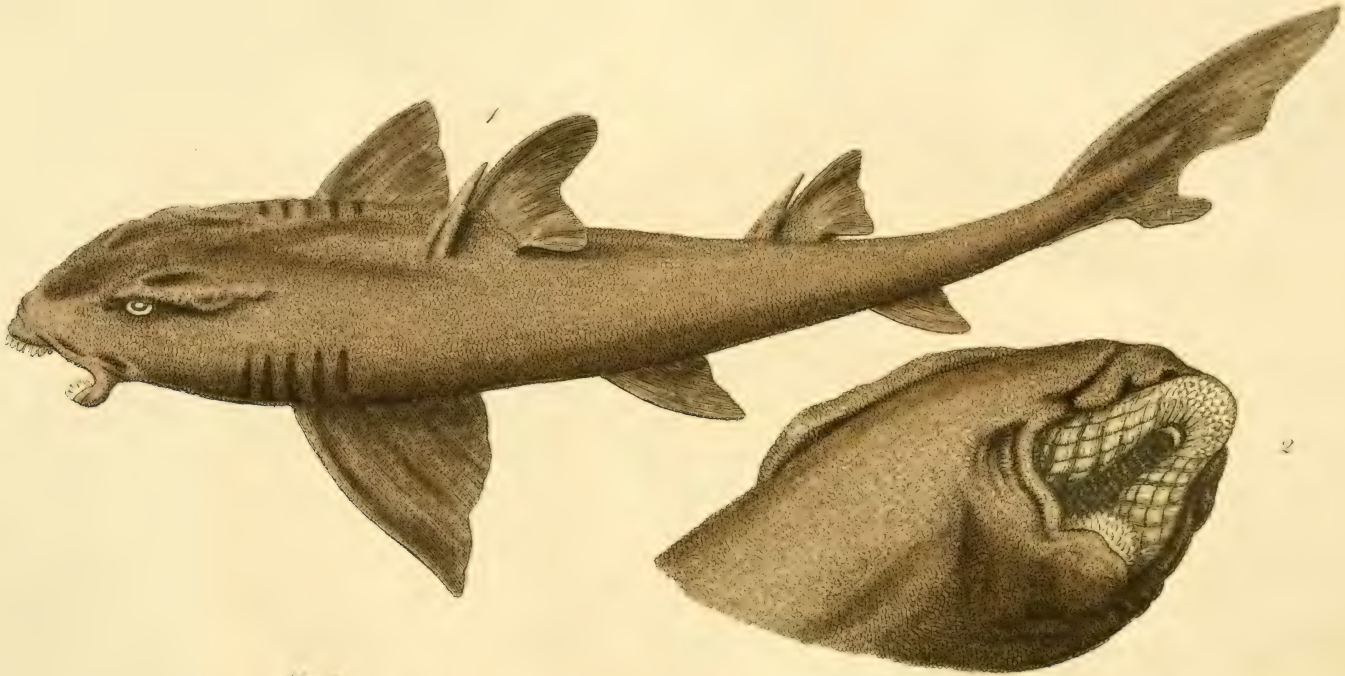
Jacksonian Shark (Squalus Jacksonii).
This is a new species, lately discovered in the harbour of Port Jackson.

Horned Trunk-Fish (Ostracion Cornutus).

Young Shark (Squalus Carcharias).
The Shark is as formidable in appearance as he is dreadful for his courage and activity. No fish can swim so fast, for he will outstrip the swiftest ship. "They are (says Mr. Pennant) the dread of "sailors in all hot countries, where they constantly "attend the vessels, in expectation of what may "drop overboard: a man that has that misfortune "perishes without redemption; they have been "seen to dart at him, like gudgeons at a worm." They are said to attack Negroes in preference to Europeans, and to attend with assiduity the slave ships from Africa to the West Indies. The Shark grows to an enormous size, sometimes thirty feet in length.

Young Sturgeon (Acipenser Sturio).
Inhabits the European, Mediterranean, Red, Black, and Caspian seas, and annually descends the rivers in spring. It is a fish of slow movement, is very prolific. Its flesh is held in great estimation.

Frog-Fish (Lophius Europæus). Taken in the river Mersey.



Hazell

1 Port Jackson Shark. 2 Front view of the Same.

Pub. by W. Bullock, London Museum Piccadilly April 1st 1812.

Herculan Beetle.

INSECTS;

(Insecta.)

——————— Each moss,
Each shell, each crawling insect, holds a rank;
Important in the plan of Him who form'd
This scale of beings; holds a rank, which lost
Would break the chain, and leave a gap
That Nature's self would rue!

In this Case is a brilliant display of the Insect tribe, consisting of a selection of about 500 of those most remarkable for their beauty of colours, extraordinary form, or singularity of manner or economy. A bare recitation of the names of this very numerous class would add but little to the information or pleasure of the general reader, and would increase the size and expence of this Catalogue unnecessarily: we shall therefore give only those best known or most remarkable.

Hercules Beetle (Scarabæus Hercules).

The Beetle here described is a native of the island of Guadaloupe; on the continent of New Spain this species is said to be often seen of very large dimensions. The horn of this species is toothed above on each side, and beneath it is covered with a substance resembling yellow plush; the proboscis below is also toothed. Between these, it is said, the insect takes the smaller branches of trees, and by swiftly

flying round soon saws them off, for the purpose of building its nest. The teeth cut away the wood, and the plush part serves to brush away the saw-dust. Dr. Shaw, however, in his Naturalist's Miscellany, says, that on a narrow inspection of the proboscis of this Beetle, it will appear no ways calculated for the sawing off branches from the trees; he reckons therefore the whole operation as a vulgar error. It is a very mischievous animal, and exceedingly difficult to be taken. It measures seven inches in length.

Actæon Beetle (Scarabæus Actæon).
This is the largest of insects, except the Crabs and Monoculi. It is a native of South America.

Stag Beetle (Lucanus Cervus).
This is found in England in decayed trees.

Patch-winged Diamond Beetle (Curculio Splendens).

Diamond Beetle (Curculio Imperialis).
There are several species of these, which, with the above, are natives of South America; and perhaps the whole insect race does not display more splendour or richness; it may be truly said, that "Solomon in all his glory was not arrayed like one "of these."

Cerambyx Giganteus. The body of this extraordinary insect is nearly six inches long. It is a native of Cayenne,—and very rare.

The *Giant Mantis* (Mantis Gigas).

Praying Mantis (Mantis Oratoria).
Most of the genus Mantis, and this species in

particular, are held sacred by the natives of the country they inhabit. From the singular manner in which it raises the upper part of the body and fore legs, it is supposed to point out the way to travellers that have lost their road. Many of the Mantis so strongly resemble leaves, that at first sight they can scarcely be known.

Great Locust (Gryllus Giganteus).

African Locust (Gryllus Capensis).

Elephant Locust Gryllus Elephas).

Of all insects which are capable of adding to the calamities of mankind, by devouring the products of the earth, Locusts seem to possess the most formidable powers of destruction. Legions of these voracious creatures are from time to time produced in the various parts of Africa, and the eastern world, where the havock they commit is almost incredible, changing in a few hours the most fertile plains into an appearance of a desart; nay, even when dead, they are terrible, since the putrefaction which arises from their inconceiveable numbers is such, that it has been regarded as one of the principal causes of a pestilence. The largest species of these insects are used as an article of food, and in many markets of the Levant they are publicly sold. The female is regarded as a very nutritious sustenance, and is much sought after.

Great Lanthorn Fly (Fulgora Lanternaria).

This highly curious insect is a native of South America; from the large, hollow, transparent projection in front of the head it emits a sufficient light for persons to read by; and travellers are said to be directed on their journey by night, by fixing one or two of them on a stick.

Common Cicada (Cicada Plebia).

The Cicada, so often commemorated by the antient poets, and so generally confounded by the major part of translators with the Grasshopper, is a native of the warmer parts of Europe, and is particularly plentiful in Italy and Greece. The common Cicada appears in the hottest summer months, and continues its shrill chirping during the greatest part of the day, sitting amongst the leaves of trees.

Atlas Moth (Phalæna Atlas).

This is by much the largest of Moths, measuring nine inches across the wings: it is a native of the East Indies and South America.

Great Black Wasp of Pensylvania.

This Wasp supplies itself with food by roving about the meadows, catching grasshoppers and other insects; on these it feeds, and not on fruits, as other Wasps do: but what is more remarkable, is the method of making their nests, and providing for their young. With great pains and industry they scratch an horizontal hole near an inch diameter and a foot long, in the steep side of a bank of loamy earth; then away the Wasp flies, and catches a large grasshopper, and lodging it in the farther end of the nest, there she lays an egg, and then goes and catches two more, and deposits them with the other, then plasters up the hole. The egg soon produces a maggot: these grasshoppers are, by marvellous instinct, provided for its food, until it changes into its pupa state, in which it lies for a certain period, and then eats its way out, and flies away, seeking its mate. What may deserve our farther attention is, the wonderful sagacity of this creature, not only in catching these large grasshoppers, though bigger than itself, which are like ours, and are very strong and nimble,

Bird-catching Spider.

Pub. by W. Bullock London Museum Piccadilly April 1.1812.

but their peculiar skill is to be admired in disabling them, either by bite or sting, so as not to kill them; for then they would soon putrefy, and be unfit for nourishment. Life sufficient is left to preserve them for the time the maggot is to feed upon them. The sting of this wasp is painful, but does not swell like others.

The Female, or Queen of the *Termites*, or *White Ant* (Termes Fatale).

Mr. Smeathman, who resided many years in Africa, has, in the 71st volume of the Philosophical Transactions, given a beautiful and interesting account of the manners, instinct, and wonderful economy of these extraordinary animals, which, from their immense number, and power of annoyance, are the greatest pest of that country.—To detail the whole of their habits and mode of life would require a volume: the instinct of the Common Ant, the Bee, or the Beaver, are trifling when compared with these. Though little larger than the Common Ant, their buildings, from the number, closeness, and magnitude, often appear like the villages of the natives; and the depredations they commit render them truly formidable: nothing but metal or glass can escape the destroying fangs of these minute invaders. The one in this collection is a pregnant Queen, the general mother of the whole community, and is a thousand times heavier than the male, or King, who is considerably larger than the labourer or soldier.—Mr. Smeathman's description of this Ant has been copied in Dr. Winterbotham's Account of Sierra Leone, and the 2d volume of Wood's Zoography, page 446. A model of the Nest of these remarkable insects, nine feet high, is in the Pantherion.

The *Bird-catching*, or *Great Surinam Spider* (Aranea Avecularia).

The insect above-mentioned is the largest of all the spiders, measuring from eight to ten inches in the extent of its legs, which are covered with rough hair: it is not uncommon in many parts of South America. It resides amongst the trees, and seizes on small birds, particularly Humming Birds, which it destroys by sucking their blood, after having first wounded them by its fangs. This Spider has eight eyes, which are disposed somewhat in the form of an oblong square; two are perfectly round, the others are of an oval shape.

Tarantula Spider (Aranea Tarantula), with its curious Nest.

This is the animal of which such long accounts have been given of the wonderful and melancholy effects arising from its bite, which is represented to be cured only by music, which caused the patient involuntarily to dance in the most violent manner; but the whole account being clearly proved to have existed in vulgar error, is not now worth repeating. The nest is highly curious from its remarkable structure; it is cylindric, with a valve or door, which the animal opens and shuts every time it enters; the manner in which this is performed, as well as the creature itself, is described by the elegant pen of Darwin, in his Zoonomia.

African Scorpion (Scorpio Afer).

There are several species of Scorpions in this collection, but none of them so remarkable, either for size or malignity of poison, as the above, which is near nine inches long, and armed in front by strong claws, resembling those of some species of crab; but its poisonous sting is situated at the end of the tail, in which may be observed the reservoir for supplying it with the fatal fluid, and the minute holes

African Scorpion.

Pub. by W. Bullock, London Museum, Piccadilly, April 1, 1812.

on each side of the sting, through which it is injected into the wound.

Great Centipede (Scolopendra Morsitans).

This is likewise a native of the hottest parts of the world, and one of the pests of society, being highly poisonous; but what renders it particularly dangerous is, its frequenting inhabited places, and biting persons during their sleep, to prevent which, they are obliged to place the feet of their bedsteads in water; it measures twelve inches in length.

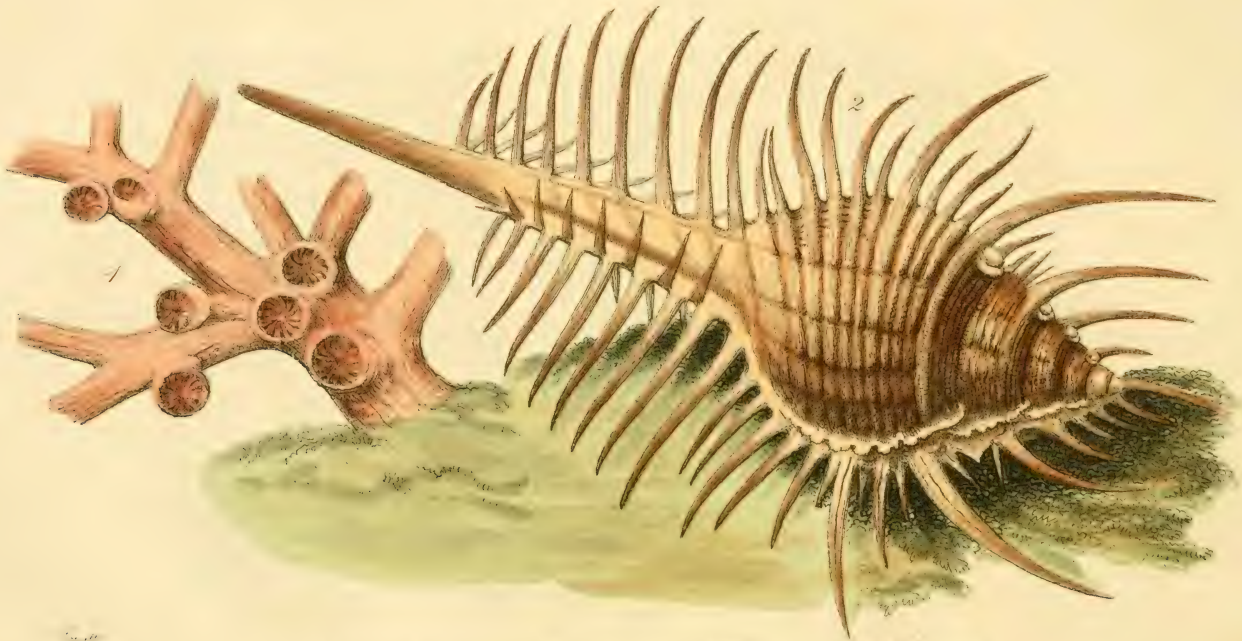
SHELLS (CONCHOLOGY).

This department has just been added, and consists of an extensive collection of beautiful and rare shells from every part of the known world; they principally occupy the centre of the Great Room, and are arranged in their respective families, according to the Linnæan classification, in Cases, and under large Glass Shades, upon appropriate bronzed stands, and make with the Fishes, Crabs, Asterias, Echini, Madrepores, Gorgonia, Isis, Sponges, and other Marine productions, a most interesting display of the inhabitants of the waters. About one thousand four hundred have their generic names attached to the Cases, and the most remarkable have their specific also; to enumerate which would far exceed the limits of a work of this description. The History of the Paper Nautilus (Argonauta Argo) is, however, so remarkable, that it cannot be omitted.

Pope, in his Essay on Man, alludes to it, where he says—

> "Learn of the little Nautilus to sail;
> "Spread the thin oar, and catch the driving gale."

Pliny describes it thus: "But amongst the principal miracles of nature is the animal called Pompilos or Nautilus: it ascends to the surface of the sea in a supine posture, and gradually raising itself up, forces, by means of its tube, all the water from the shell, in order that it may swim the more readily;



1. May blossom Coral. 2 Thorny Woodcock.

Pub. by W. Bullock, London Museum, Piccadilly April 1. 1812.

then throwing back the two foremost arms displays between them a membrane of wonderful tenuity, which acts as a sail, while with the remaining arms it rows itself along, the tail in the middle acting as an helm to direct its course; and thus pursues its voyage like a little ship, till alarmed by any appearance of danger, when it takes in the water, and descends."

The small Bell Glass, No. 4, contains several articles which were once the property of the celebrated Sir Charles Linnæus; a specimen of whose writing is likewise inclosed. Presented by Dr. Smith, President of the Linnæan Society.

Among the Turbos is the finest specimen of that rare shell the Wentletrap (Turbo Scalaris) ever known; it was brought from Amboyna by the late Mr. Webber, of Blackheath, who once refused the sum of £500, offered for it by the late Earl of Bute.

ZOOPHYTIES.

CORALS, MADREPORES, &c.

Gradual, from these what numerous kinds descend
Evading e'en the microscopic eye!
Full Nature swarms with life; one wond'rous mass
Of animals, or atoms organized,
Waiting the vital breath, when Parent Heaven
Shall bid his spirit blow. THOMSON.

The various Cases contain a rich and numerous assemblage of the inhabitants of the marine world, disposed in such a manner as they may be supposed to exist in the bottom of their native element: they consist of Shells, Corals, Corallines, Madrepores, Gorgonias, Sponges, &c. &c. to describe which accurately would require the pen of an Ellis or a Solander, and would far exceed the limits of this little publication. We shall merely observe, that till lately the principal parts of the contents of these Cases were considered as Marine Vegetables, growing from the bottom of the ocean; but the observation of later naturalists have decidedly proved them to be the fabrication of different minute animals, which however insignificant they may appear to the unobserving part of mankind, are, from their immense, their in-

conceivable numbers, of more consequence than generally supposed: it is to the accumulated myriads of them that we owe part of the island on which we live; our hills are in many places full of them, and some rocks are entirely of their formation. New Islands have been formed within the memory of persons now living; and many seas are becoming every year more difficult to navigate, being nearly choaked up by the habitations of animals almost too small for human perception.

"The whole groupe of the Thousand Islands, and indeed the greater part of those whose surfaces are flat, in the neighbourhood of the Equator, owe their origin to the labours of that order of marine worms which Linnæus has arranged under the name Zoophyta. These little animals, in a most surprising manner, construct their calcareous habitations under an infinite variety of forms; yet with that order and regularity, each after its own manner, which, to the minute inquirer, is so discernible in every part of the creation. But, although the eye may be convinced of the fact, it is difficult for the human mind to conceive the possibility of insects so small being endued with power, much less of being furnished in their own bodies with the materials for constructing the immense fabrics, which, in almost every part of the Eastern and Pacific oceans, lying between the Tropics, are met with in the shape of detached rocks, or reefs of great extent, just even with the surface; or islands already clothed with plants, whose bases are fixed at the bottom of the sea, several hundred feet deep, where light and heat, so very essential to animal life, if not excluded, are sparingly received and feebly felt. Thousands of such rocks, reefs, and islands are known to exist in the Eastern ocean, within, and even beyond the limits of the Tropics.

The eastern coast of New Holland is almost wholly girt with reefs and islands of coral rock, rising perpendicularly from the bottom of the abyss. Captain Kent, of the Buffalo, speaking of a coral reef of many miles in extent, on the south-west coast of New Caledonia, observes, that "it is level with the water's edge, and towards the sea as steep as the wall of a house; that he sounded frequently within twice the ship's length of it, with a line of one hundred and fifty fathoms, or nine hundred feet, without being able to reach the bottom." How wonderful—how inconceivable! that such stupendous fabrics should rise into existence from the silent but incessant and almost imperceptible labours of such insignificant worms."

To the Museum has just been added, the fine Collection of Fossil-shells, and other Antediluvian remains, collected by the late Mr. Knight of Blandford: they are principally of this country, and those from Hordwell Cliff extremely perfect and interesting.

A very large Bell Glass, containing about 120 species of Crabs and other Marine Animals, disposed in an appropriate manner on Corals, &c.

Crabs.

Pub. by W. Bullock, London Museum, Piccadilly, April 1st 1812.

Bell Glass, No. 6.

MINERALS.

Beautiful *Group of Chrystals,* of extraordinary size, from the mines of Dauphiny: presented by Thomas Allan, Esq. of Edinburgh.

Pipe Chalcedony, from Iceland.

A large specimen of *Opal* in the Matrix.

Three *Opals,* polished.

Native Gold on *Quarts,* from Transylvania.

Native Gold, from the Wicklow Mountain in Ireland.

Oriental Cat's Eye.

Aqua Marine or *Beryl,* polished.

Fluor Spar, from Derbyshire.

Group of Amethyst Chrystals, from Hungary.

Sulphurets of Arsenic.

Beautiful *Pearl Spar,* with snow-like appearance, from Transylvania.

Pearl Spar, Chrystalized, from Hungary.

Fine specimen of *Chrystalized Iron Ore,* with an iridescent surface, from the Isle of Elbe, on the coast of Tuscany.

Splendid *Iron Ore,* from Hungary.

Bubbled *Malachites,* Carbonate of Copper, with Mountain Blue, from Siberia.

Native Copper, from Cornwall.

Copper Ore, from ditto.

Model of the *Pigot Diamond,* valued at 35,000l.

Variety of *Chrystals,* from Buenos Ayres; containing Silver-like appearances, and other extraneous matter.

MISCELLANEOUS ARTICLES

Numerous, extraordinary, and stupendous remains of non-descript animals, found in the vicinity of the rivers Ohio, Wabash, Illinois, Mississippi, Osage, Missouri, &c. brought to England by a gentleman who passed several years on a mineralogical tour in unfrequented parts of North-America. They consist of different parts of animals, such as heads, vertebræ, ribs, grinders, and horns; among which, the most worthy of remark is the foot of a clawed animal of the *feræ* order, or tiger species. This paw, clothed with flesh, skin, and hair, filled with muscles, flexors, and cartilages, must, when dilated on its prey, have covered a space of ground four feet by three. Did the animal to whom it appertained partake of a strength of body proportionate to the size of this foot, and at the same time add the agility and ferocity of the tiger to his unequalled magnitude, he must have been the terror of the forest, and of mankind. That such an animal did exist, this specimen is a sufficient proof; nor did it alone inhabit America, for we have reason to believe that an animal, similar in some respects to the above, once had possession of our island; for various remains of non-descript animals have been frequently dug up of late in different counties. The thigh-bone marked A. which is

nearly four feet in length, was found in digging the Ellesmere Canal, in the year 1803, near the village of Wrenbury, in Cheshire. B. is one toe of the clawed foot. C. several joints of the tail, which must in the living animal have been as thick as an ordinary oak tree. D. one of the vertebræ of the back; the passage for the spinal marrow is so large, that a man's arm may with ease pass through it. E. is a section of a spiral tusk, thirteen feet in length. F. a carnivorous grinder, nine pounds weight, being one hundred and forty-four times as heavy as that of a horse. G. a large grinder of another species of these stupendous non-descripts, evidently an herbivorous animal. On the subject however of these Incognita, but a few words are necessary: they have been on the whole the surprise of the enlightened naturalist, and the admiration of the classical scholar; we therefore refer those, who wish to be more particularly informed respecting these remains, to a pamphlet, entitled "*Memoirs of Mammoth, and other extraordinary and stupendous bones,*" written by the gentleman who brought them to England, and sold them to the Proprietor of this Museum. It may be had at the Rooms, price 1s. 6d.

A Glass Cover near the bones, contains a very interesting article to the Naturalist, as it tends to throw some light on an obscurity which envelopes these objects. It is a portion of the different kinds of hair of a species of Mammoth recently found entire, and brought to St. Petersburg by Mr. Michael Adams, who has published a particular account of it, of which the following is an extract. "In the summer of the year 1799, during their annual excursions, a chief of the Tongouses discovered on the shore of the frozen sea, near the mouth of the river Lenna, an entire Mammoth, enclosed in a rock

of ice, which rendered it impossible to be got at, till about five years afterwards, when during a warm summer, the ice became so much dissolved, that the huge carcass fell out, and slid down about a hundred paces from its bed; when the Tongouses cut off the ivory tusks (the only part considered of value by them) and left it a prey to the white Bears, Gluttons, Wolves, and Foxes. It was near two years afterwards, that, by a fortunate circumstance, Mr. Adams heard of it, went immediately to the spot, and rescued the compleat skeleton and part of the skin, which he transported by land to St. Petersburg, (a distance of 7500 miles) where it is now set up in the Imperial Academy. A rude drawing, made of it when perfect, represents it as having an appearance something between a Pig and an Elephant, having pointed ears, and a long bristly mane along the whole back; it was about 15 feet in length, and 10 high, the bones of the head (without the tusks) weighed 460lbs. Upon the whole, there can be little doubt but it was the species of Northern Elephant now extinct, the bones of which are found both in America and Europe; large quantities having been lately discovered in several parts of England."

Sir Joseph Banks received a piece of skin and portions of hair, similar to what is in this collection, as a present from Mr. Adams, which is now in the Surgeons Hall, Lincolns-Inn-Fields.

Glass Case, containing an *Egyptian Mummy.*

The ancient methods observed by the Egyptians in embalming human bodies, according to Herodotus, were performed after this manner: "There were cer-
" tain persons appointed for the business, who had
" three prices according to the workmanship. In
" the most esteemed method of embalming, they ex-

" tracted the brains by the nose with a crooked
" iron, and then poured in drugs; afterwards, they
" opened the body, took out the bowels, washed the
" inside with palm wine, and having rubbed into it
" pounded perfumes, filled the cavity with myrrh,
" cassia, and other spices, and then sewed it up.
" After this they washed the body with nitre, and
" let it lie seventy days; and having washed it
" again, bound it up in folds of linen, besmearing it
" over with gums, which the Egyptians used instead
" of glue. The relations then took home the body,
" and enclosing it in the wooden figure of a man,
" placed it in the catacombs. Another method of
" embalming, was injecting turpentine of cedar with
" a pipe into the body, without cutting it; they
" then salted it for seventy days, and afterwards
" drew out the pipe, which brought along with it
" the intestines. The nitre dried up the flesh, leav-
" ing nothing but skin and bones. The third way
" was only by cleansing the inside with salt and
" water, and salting it for seventy days." From what Diodorus observes, one would imagine that there was a way of preserving the bodies much superior to either of the former; for he says, their eye-brows and eye-lashes, with the form and appearance of the whole body, were so well preserved, that they might be known by their features; whence many of the Egyptians kept the bodies of their ancestors in houses adorned at a great expence; and had the pleasure to see their forefathers for many generations back, and to observe all their features as well as if they were living. It does not, however, appear that any bodies were ever discovered embalmed in this manner.

The Mummy in this collection was brought from Egypt by the French, and taken from them by an

English privateer, and was remarkable for containing only the head, and part of the thigh and leg bones, which were enveloped in folds of fine linen, nearly three inches thick. The linen in some parts was as white and perfect as when first done, and on the legs there was some of the flesh still remaining, although, from a moderate calculation, it must have been embalmed upwards of two thousand years.

A *Mummy* of the *White Ibis.* The White Ibis, though now unknown to the Egyptians, was formerly worshipped by them as a deity, in consequence of the great service which it did them in destroying the vast quantities of serpents and reptiles with which that country was infested. The veneration for them extended even after their death; for whenever the body of a dead Ibis could be found, it was carefully embalmed, after the manner of the mummies. Mr. Bruce, the Abyssinian traveller, mentions his having opened several of them, in which the bones, and even some feathers, were entire. Buffon says, "he received several of these mummies from the bird pits in the plains of Saccara; that the shape of all of them was a sort of doll, formed by the bandages which incased the bird, of which the greater part fell into black dust when the ligatures were removed." They are generally preserved in earthen jars, with the cover cemented down; but sometimes, as is the case in this, put into a kind of coffin made of sycamore, the covers of which were decorated with hieroglyphics, which are yet visible in the one in this Museum.

A *Mummy* of the *Ibis,* opened to shew its contents.

Hasselquist, and other naturalists and travellers who have visited the catacombs of Egypt, say that

the Mummies of the Ibis contain in general little but black dust, which is believed to be the remains of the bird: but that they were informed that sometimes, though very rarely, the bones and feathers were found in them: this is the case with the one in this Museum; the cloth in which it was wrapped, the bill, bones, and feathers, are still entire. This very interesting and curious article was added to this collection by the liberality of Jacob Wilkinson, Esq. of Bath, whose brother, C. Wilkinson, Esq. of Clapham, brought it from Egypt. What are our boasted monuments of antiquity? the dates of our churches and cathedrals (though crumbled and crumbling into dust) are but as yesterday when compared with the age of a few perishable feathers, which had existence on the banks of the Nile perhaps two thousand years before the foundation stone of the first of them was laid. What a field for reflection does the contemplation of this article open to our view.

> "Son of to-day, thy daring hopes are vain,
> "That aught of thee my lengthened date shall gain."

A Mummy of the Ibis, in its original envelope, as taken from the earthen vessel; the linen cloth, for the manufacture of which the ancient Egyptians were celebrated, remaining entire. Presented by the Bishop of Durham.

Mummy of the Head of some large Graniverous animal.

Ditto of the *Ichneumon*.

The two last were brought from Egypt, and presented to the Museum by the Earl of Cavan.

Elephant's Head and Grinders; presented by Samuel Staniforth, Esq. Liverpool.

The Head of the *Gnu* (Antelope Gnu), finely preserved.

The Skull of the *Babyroussa*, or *Indian Hog*. The most distinguishing characteristic of this animal consists in four large tusks, the two stoutest of which proceed, like those of the wild boar, from the under jaw, pointing upwards; the two others rise up like horns on the outside of the upper jaw, just above the nose, and extend in a curve above the eyes, almost touching the forehead, and are about seven inches long. The use this animal makes of these tusks is in sleeping; which they do, as is said, by hooking them on the branches of trees. The Babyroussa is found in several of the islands of the East Indies.

The Horn of the *Ibex*.

Three Noses of the *Saw Fish*. The largest of these is three feet seven inches long, eight inches broad at the base, and four at the point; it is armed at the sides with thirty-eight strong teeth, about an inch and a half long, and two inches from each other.

The Jaws of an enormous *Shark*, which measure six feet six inches in circumference.

The Fossil Tooth of a Shark, nearly four times as large as those in the above jaws.

Head of a *Crocodile*, near twenty feet long.

The Cavity of a Whale's Ear.

The Horn of the Narwhale, or Sea Unicorn, 9 feet 6 inches long, of the most beautiful Ivory, finely wreathed.

The Jaws of a Porpoise.

Skull of the Walrus.

Glass Case, containing four different Beaks and Heads of the Calao, or Horn-bill Bird; remarkable for the singular appendages on the upper mandibles. No. 1. Helmet Hornbill. No. 2. Pied Hornbill. No. 3. Rhinoceros Hornbill. No. 4. Philippa Hornbill.

Skeletons of Birds, viz. the Creeper, Snipe, Oyster Catcher, Lark, Starling, Green Grosbeak, Fieldfare, and Moor Game.

FINIS.

Reynell, Printer, 21, Piccadilly, London.

MEMOIRS

OF

MAMMOTH,

AND OTHER

EXTRAORDINARY AND STUPENDOUS

BONES.

MEMOIRS

OF

MAMMOTH,

AND VARIOUS

OTHER EXTRAORDINARY AND STUPENDOUS

BONES,

OF

INCOGNITA, OR NON-DESCRIPT ANIMALS,

FOUND

IN THE VICINITY

OF THE

OHIO, WABASH, ILLINOIS, MISSISSIPPI, MISSOURI, OSAGE, AND RED RIVERS, &c. &c.

PUBLISHED

FOR THE INFORMATION OF THOSE LADIES AND GENTLEMEN, WHOSE TASTE AND LOVE OF SCIENCE TEMPT THEM TO VISIT THE

LIVERPOOL MUSEUM.

BY TH. ASHE, ESQ.

"His Bones are as strong pieces of brass; his Bones are like bars of iron." JOB.

LIVERPOOL,

PRINTED BY G. F. HARRIS.

1806.

INTRODUCTION.

A Gentleman who has passed several years in North America, and whose pursuit was the study of nature, has just returned to this country with several boxes containing objects of the highest interest to the curious and intelligent world. Conscious of the erroneous opinions which had been entertained respecting the stupendous Animal Remains found in Russia, Siberia, and the western climes, he bent his mind designedly to that particular investigation, and made researches for such materials as he knew to be necessary for the foundation of abstract truth, or reasonable hypothesis. The absence of such materials led the ingenious author of "*Notes on Virginia*," to various beautiful visions, but to no salutary or solid fact. From the same cause, the celebrated Doctor Hunter, and many others, have wasted infinite science on some favourite theory; and the world, from this wide and multifarious opinion, had to embrace, now one delusion, and

now another. Hence some thought the Bones were the remains of a giant. Many called them extraneous fossils; others regarded them as mineral substances; some said the animal was carnivorous; others as strenuously asserted it to be herbivorous, graminivorous, or mixed. At length wearied by the contest, mankind associated in one idea;—the bones were called "*mammoth bones*," without any respect to the difference in their character, and the contrasted sensibilites which such difference generates and inspires. But from the evidence of the extraordinary bones now collected, *and preserved for public inspection in the Liverpool Museum*, it is clearly demonstrated, that they are the remains of various stupendous incognita, or nondescript animals, of perfectly different propensities, dispositions, and manners of life.

Box, No. 1,

Contains the principal part of the head of a carnivorous animal. The jaws are entire, filled with grinders. The seat of

the muscles is traced along the nose, and, from their depth, must have given violent action to the nostrils and lips. Here is also a *maxillæ inferior* of the same kind of monster, but much larger, and of great weight and beauty.

No. 2,

Possesses the vertebræ, in high preservation. The *os sacrum*, and *coccygis* are connected by the ossification of the cartilage; and the bed of the coccygæi muscles are strongly visible. Through the cavity for the passage of the spinal marrow a man's arm can easily pass.

No. 3,

Has the *os ischium*, pelvis thigh, and leg bone. These bones are both ponderous and perfect.

No. 4,

Contains an object of inexpressible grandeur and sublimity. It is the foot of a clawed animal, possibly of the order of *feræ*, for the claws are sheathed and er-

tractile, in the manner of the cat, tiger, and lion. When this paw was dilated on its prey, filled with muscles, flexors, and cartilage, clothed with flesh, turgid skin, and hair, it must have covered a space of ground four feet by three. The animal to whom it appertained, with superior agility and ferocity to the tiger, with a body, too, of unequalled magnitude and strength, must have been the terror of the forest and of man. This monument stands alone. It has no competitor. It is the first and only one of such exorbitant magnitude ever discovered, or probably that ever will be.

No. 5,

Contains a rib, and fragments of ribs, not concave internally, but with the edges standing out, to give more energy, and to bear more resistance. From hence it would appear that the animal was endowed with the gift of contraction: his ribs closing together like the sticks of a fan, he could spring forward, or make a mighty leap. This box contains other

fragments, whose office in the frame is not sufficiently denoted for description.

No. 6,

Encloses four extraordinary bones. They defy the intelligence of the writer. He cannot discover what part they performed in the animal machine. He supposes them *femori* of some *incognitum* of great force, as is wonderfully expressed by the deep insinuosities in the bones, in which the tendon of the triceps, and other large muscles, three inches in diameter, could lie concealed.

No. 7,

Embraces the teeth of various animals, weighing from one ounce to ten pounds. The grinding surfaces denote the pursuits and passions of each animal. The large grinder, with parallel lines of enamel slightly indended, bespeaks the peaceable herbivorous animal, of the elephantine species. The ponderous grinder, with high double-coned processes, and interlocking fangs, denotes the cruel carnivo-

rous monster, lurking in the woods. The teeth with less indention than this, betray a mixed animal; and those which have still less indention, and which express a rotatory motion, show the animal to be graminivorous, and sometimes also mixed. This box contains twenty specimens of the above characters. Some of the teeth are elegantly stained, by the long and unremitting industry of nature; and some, from lying in contact with mineral substances, have obtained radiant and prismatic colours.

No. 8.

Contains about twenty four specimens of carnivorous grinders, of such variety of size that the animal's age can be followed from one to innumerable years. A process, which sunk into the *maxillæ*, is five inches wide, and the cones on the surface two inches deep. Some teeth exhibit nothing but the *cortex*, from which fire can be struck, and yet many are wasted by manducation. The canals, in which nerves and blood-vessels were lodged, are

perfect, and discover the great supply which prevented the waste of attrition, and made the teeth endure the compression of any hard body between the jaws. This box affords a rich contemplation.

No. 9,

Possesses the remains of an animal of the anterior world. Coming to a rock, which the naturalist had to spring, in following a vein of mineral, this grand object appeared under the deep explosion. It is the *defence* of an *herbivorous incognitum*, of ponderous volume, and amazing height. The *defence* in a state of perfection, must have been five hundred weight, implying a head of twelve hundred weight. The present fine subject, in a state of decomposition, weighs one hundred and fifty pounds, is twenty-five inches in circumference, and when (being in three parts) put together, is sixteen feet long. It is by no means in the form of that of the elephant; it makes a complete revolve, and appears as if the animal could have moved it at pleasure. The grain traverses

in diamonds, in the manner of the finest ivory, and the internal substance is as white as snow. Several thousand ages have only led this to a gradual decomposition. It may yet last many years; but must be touched with a trembling and a pious hand, by him who can admire the wonderful greatness and wisdom displayed in the operations of nature, and who can contemplate with rapture an object which, it is hoped, the vulgar will neglect, as "a dreary void."

No. 10,

Contains the tusks, *defenses*, or horns, of various animals. One may be attributed to the rhinoceros, another to the elephant, but none to the hyppopotamus or river horse. One appertained to a huge animal of the ox kind, and another to some mixed *incognitum*, of great stature. The *defense* is better than six feet; not running in a *spiral volute*, but rising nearly perpendicular, and turning off at the point. Such was never before found. The animal and his attributes are unknown.

MEMOIRS

OF

MAMMOTH,

AND OTHER

EXTRAORDINARY AND STUPENDOUS

BONES.

MEMOIR I.

I VENTURE to invite the public attention to a subject, which has for several years excited considerable curiosity, but no profound or solid investigation. In accompanying me through this arduous duty, I trust you will not expect from me a rhetoric to admire, or an eloquence to applaud; *these* are endowments which the naturalist has neither leisure to cultivate, nor to acquire: therefore I aim at nothing but simplicity and truth, and shall even divest myself of such technical terms as may perplex the reason of those who are not desi-

rous of entering into useless refinements, or tedious abstractions.

Long has the greater part of mankind laboured under difficulties, which might have been avoided by an acquaintance with the discoveries of travellers and philosophers. During the study of most sciences, we notice improvements unknown to the majority of the people; and in no one have these become more conspicuous, than in the study of natural history, and particularly that portion of it which relates to the extinct animals of the immense and interesting continent of America.

Since the wild conjectures of deluded men were banished from the annals of natural history, the study has become one of the most useful and pleasing to all of a common understanding. The science is now characterised by a manner, hostile only to the pride of the pedantic scholar. I have the honor to open some of the most extensive scenes;—let their magnificence lead the intelligent. An entrance is desired, that the wonderful greatness and wisdom displayed in the operations of nature may be contemplated with rapture, in parts ne-

glected by the vulgar as a " dreary void." For my part, although imperious circumstances frequently compelled me to suspend my views, still I bring with me an undecayed sensibility to their attractions, and a determination to perform my duty with all the assiduity and zeal I am capable of exerting, and merited by your encouragement.

It is not a little to the honor of the present age, that so many gentlemen of liberal fortune and respectable families, declining the slippery paths of political ambition, have dedicated much of their time, and not a little of their wealth, to sustain the cause of science and of literature. This observation will undoubtedly, from the association of ideas, recall the names of Walpole, of Pennant, of Jefferson, and of Banks, to your familiar recollection;—painful recollection, which informs, that the two first are now no more!

Of the writers of natural history I only mention the names of those who have endeavoured to make themselves acquainted with the object of our immediate investigation. And yet how imperfect was the information they

obtained! It could not be otherwise. Sir Joseph Banks passed the greatest part of his life in anatomizing the smallest productions of nature, such as grubs and butterflies; the province of Walpole was equally confined; Pennant never left Great Britain; and Mr. Jefferson, though amply qualified by an improved, philosophic, and energetic mind, had not met with sufficient evidence to establish irrefragible and certain conclusions. Hence the variety of conjecture, and error of judgment, which, on this subject, so universally abound. The ruling passions of mankind are excited, and the future current of their lives frequently directed, by trivial circumstances. One of the greatest painters of the age was attracted by an irresistible impulse towards his art, by a perusal of a treatise on it; and Mr. Jefferson's Notes on Virginia, at an early period gave me a turn for natural history, which has never abandoned me, even to this middle period of life. His critical and philosophic remarks on the mammoth, excited my enthusiasm, but did not satisfy my judgment; and I determined to explore the country where the bones of so stupendous an animal were so frequently found. With this intent, I gained the Apelichean; de-

scended the Ohio; traversed the depths of the valley and the highest summit of the mountain; saw the Illinois, the Mississippi, and the Missouri; and at length obtained the completion of my wish, the ardent object of my prayer,—a collection of bones, vulgarly called *mammoth bones*, but which I shall treat on under separate heads.

Before, however, I go into details of this particular nature, it may be amusing to you, to hear the conjectures of those who have passed before me, and the authorities on which such conjectures were grounded.

It is now ninety years ago, since the first remains of this animal were found in America. They were then thought to be the remains of a *Giant!* The formation of the teeth, the under jaw, the singularity and size of the bones, and the difficulty of discovering what part they performed in the animal machine, led to this egregious error; which was augmented by that disposition to the marvellous, which emigration encourages mankind to feel. This absurd idea gave way to one, not more sound. These remains were called *extraneous fossils* by some, by

by others *mineral substances.* However, but few years elapsed, before numerous attempts were made by all nations to procure a satisfactory collection of bones. At length Mr. Peale, of Philadelphia imagined he had accomplished this great object. He dug up a parcel of bones in Ulster county, state of New York, formed a skeleton, and dignified it with the name of *mammoth*, a Russian term, from *memoth*, a word derived from the Arabic *mehemot*, signifying the *behemot* of *Job.* This word is applied to any animal of extraordinary bigness: for instance, *fyhl* is the Arabic appellation for an elephant of ordinary size; but when of uncommon magnitude, the adjective *mehemodi* is always added.

The skeleton exhibited by Mr. Peale is of the following dimensions:—

Height over the shoulders 11 feet; length from the chin so the rump 15 feet; from the end of the tusk to the end of the tail 31 feet; width of the hips and body 5 feet 8 inches; length of the under jaw 3 ft. 1 inch; weight of the same 63½ lbs; length of the thigh bones 3 ft. 7 inches; smallest circumference of the

same 1 foot 6 inches; length of the bone of the fore leg 2 ft. 9 inches; length of the tusks, *defenses*, or horns, 10 ft. 7 inches; circumference of one tooth 1 ft. 6½ inches; weight of the same 4 lbs. 10 oz. The whole weighing about 1000 lbs.

Within the breast of this skeleton Mr. Peale, accompanied by a dozen of his friends, partook of a superb dinner.

The curiosity excited by this singular spectacle was augmented by the following tradition, then in circulation, and said to be delivered in the terms of a Shawanece Indian:—

" Ten thousand moons ago, when nought but gloomy forests covered this land of the sleeping sun; long before the pale men, with thunder and fire at their command, rushed on the wings of the wind to ruin this garden of nature; when nought but the untamed wanderers of the woods, and men as unrestrained as they, were the masters of the soil; a race of animals were in being, huge as the frowning precipice, cruel as the bloody panther, swift as the descending eagle, and terrible as the angel of night. The pines crashed beneath their

feet ; and the lake shrunk when they slacked their thirst. The forceful javelin in vain was hurled, and the barbed arrow fell harmless from their side. Forests were laid waste at a meal ; the groans of expiring animals were heard, and whole villages, inhabited by men, were destroyed in a moment. The cry of universal distress extended even to the regions of peace in the west, and the Good Spirit interposed to save the unhappy. The forked lightning gleamed all around, and loudest thunder racked the globe. The bolts of heaven where hurled upon the cruel destroyers alone, and the mountains echoed with the bellowings of death. All were killed except one male, the fiercest of the race, and him even the fury of the skies assailed in vain. He ascended the bluest summit which shades the source of many waters, and, roaring aloud, bid defiance to every vengeance. The red lightning scorched the lofty firs, and rived the knotty oaks, but only glanced on the enraged monster. At length, maddened with disdain, he leaped over the waves of the West, and at this moment reigns the uncontrouled monarch of the wilderness, in despite even of Omnipotence himself."

As the enthusiasm, awakened by the first discovery of these stupendous remains, began to subside, and as the effect of this sublime tradition must necessarily have yielded to reason and abstract enquiry, it was soon ascertained, that bones and skeletons of vast magnitude had been frequently found in Siberia, Russia, and Germany. Many specimens of them are to be seen in the Imperial Cabinet at Petersburgh; in the British, Doctor Hunter's, and the late Sir Ashton Lever's Museums, and in that of the Royal Society. Several eminent naturalists, as Sir Hans Sloane, Gmelin, Daubenton, Buffon, &c. are of opinion, that these prodigious bones and tusks are really the bones and tusks of elephants; and many modern philosophers have held the mammoth to be as fabulous as the centaur. The great difference in size they endeavour to account for, as arising in difference in age, sex, and climate; and the cause of their being found in those northern parts of the world, where elephants are no longer natives, nor even long exist, they presume to have arisen from hence, that, in the great revolutions which have happened in the earth, the elephants, to avoid destruction, have left their native country, and dispersed themselves where

ever they could find safety. Their lot has been different. Some in a longer, and some in a shorter time after their death, have been transported to great distances by some vast inundations. Those, on the contrary, which survived, and wandered far to the north, must have fallen victims to the rigour of the climate.

In the year 1767, Doctor Hunter had an opportunity of investigating more particularly this part of natural history; and has evidently endeavoured to prove, that these fossil bones and tusks are not only larger than the generality of elephants', but that the tusks are more twisted, or have more of a spiral curve than elephants'; and that the thigh and jaw bones differ, in several respects, from those of the elephant: but what appeared to put the matter beyond all dispute, was, the shape of the grinders, which seemed to belong to a carnivorous animal, or at least to an animal of the mixed kind. Some have supposed these bones to belong to the *hippopotamus*, or river horse; but there are many reasons against this supposition, as that animal is even much smaller than the elephant, and has such remarkably short legs, that his belly reaches within a few inches of the ground.

America seems to be the quarter where the *remains* in question most abound. On the Ohio, and in many parts further north, tusks, grinders, and skeletons of unparalleled magnitude, are found in vast numbers, some lying on the surface of the earth, and some a little below it. Mr. Stanley, taken prisoner by the Indians near the mouth of the Tenessee River, relates that being transferred thro' several tribes, he was at length carried over the mountains, west of the Missouri, to a river which runs westwardly; that these bones abounded there; and that the natives described to him an animal, to which they belonged, as still existing in the northern parts of their country. Bones of the same kind have been found in salines opened on the North Holston, a branch of the Tenessee about the latitude 36 north. Instances are mentioned of like animal remains found in the more southern climates of both hemispheres; but Mr. Jefferson observes, that they are either so loosely mentioned as to leave a doubt of the fact; so inaccurately described as not to authorize the classing them with the great northern bones; or so rare as to found a suspicion, that they have been carried thither as curiosities from more northern regions. "So that on the whole

(continues he) there seems to be no certain vestiges of the existence of this animal farther south than the salines last mentioned. It is remarkable, (he adds,) that the tusks and skeletons have been ascribed to the elephant, while the grinders have been given to the hippopotamus or river horse. And yet it will not be said, that the hippopotamus and elephant came always to the same spot, the former to deposit his grinders, and the latter his tusks and skeleton! For what became of the parts not deposited there?

"We must agree, then, that these remains belong to each other; that they are of one and the same animal; that this was not a hippopotamus, because the hippopotamus had no tusks nor such a frame, and because the grinders differ in their size as well as in the number and form of their points." That it was not an elephant he thought ascertained by proofs equally decisive. "I will not avail myself (he says) of the authority of the celebrated anatomist, Mr. J. Hunter, who from an examination of the tusks has declared, they were essentially different form those of the elephant; because another anatomist, D'Aubenton, equally celebrated,

has declared on a like investigation that they are precisely the same.

" Between two such authorities I will suppose this circumstance as equivocal. But, *first*, the skeleton of the mammoth bespeaks an animal of five or six times the cubic volume of the elephant. *2dly.* The grinders are five times as large, are square, and the grinding surface studded with four or five rows of blunt points; whereas those of the elephant are broad and thin, and their grinding surface flat. *3dly.* I have never heard of an instance, and suppose there has been none, of the grinder of an elephant having been found in America. *4thly.* From the known temperature and constitution of the elephant, he could never have existed in those regions, where the remains of the mammoth have been found. The elephant is a native only of the torrid zone and its vicinities: if, with the assistance of warm apartments and warm clothing, he has been preserved in life in the temperate climates in Europe, it has only been for a short portion of what would have been his natural period; and no instance of his multiplication in them have ever been known. But no bones of the mammoth, as I

have before observed, have been ever found farther south than the salines of the Holston, and they have been found as far north as the arctic circle. Those, therefore, who are of opinion, that the elephant and mammoth are the same, must believe, 1*st*, that the elephant known to us can exist and multiply in the frozen zone; or, 2*dly*, that an internal fire may once have warmed those regions, and since abandoned them; of which, however, the globe exhibits no unequivocal indications: or, 3*dly*, that the obliquity of the ecliptic, when these elephants lived, was so great as to include within the tropics all those regions in which the bones are found: the tropics being, as is before observed, the natural limits of habitation for the elephant. But if it be admitted that this obliquity has really decreased, and we adopt the highest rate of decrease yet pretended, that is, of one minute in a century—to transfer the northern tropic to the arctic circle would carry the existence of these supposed elephants 250,000 years back; a period far beyond the conception of the duration of animal bones left exposed to the open air, as these are in many instances. Besides, though these regions would then be supposed within the tropics, yet their winters

would have been too severe for the sensibility of the elephant. They would have had, too, but one night and one day in the year; a circumstance to which we have no reason to suppose the nature of the elephant fitted. However, it has been demonstrated, that if a variation of the obliquity in the ecliptic takes place at all, it is vibratory, and never exceeds the limits of 9 degrees, which is not sufficient to bring these bones within the tropics.

"One of these hypotheses, or some other equally arbitrary and inadmissible to cautious philosophy, must be adopted, to support the opinion, that these are the bones of the elephant. For my own part, I find it easier to believe that an animal may have existed, resembling the elephant in its tusks and general anatomy, while his nature was in other respects extremely different. From the 30° of south latitude to the 30° of north, are nearly the limits which nature has fixed for the existence and multiplication of the elephant known to us. Proceeding thence northwardly to $36\frac{1}{2}°$, we enter those assigned to the mammoth. The farther we advance north, the more the vestiges multiply, as far as the earth has been explored

in that direction ; and it is as probable as otherwise, that this progression continues to the pole itself, if land extend so far. The centre of the frozen zone, then, may be the acme of their vigour, as that of the torrid is to the elephant. Thus nature seems to have drawn a belt of separation between these two tremendous animals, the breadth of which belt, indeed, is not so precisely known, though at present we may suppose it about 6½ degrees of latitude ; to have assigned to the elephant the regions south of these confines, and those north to the mammoth, founding the constitution of the one in extreme heat, and that of the other in the extreme of cold. When the Creator has therefore separated their nature as far as the extent of the scale of animal life allowed to this planet would permit, it seems perverse to declare it the same, from a partial resemblance of the tusks and bones. But to whatever animal we may ascribe these remains, it is certain, that such an one existed in America, and that it was the largest of all terrestrial beings of which any traces have been known to appear." Such are the conclusions of the ingenious author of "*Notes on Virginia*."

Since the publication of the "*Notes*," however, many additional facts have occurred, which favor the assigning a *wider* range to this incognitum; for in cutting the Santre and Cowper River Canal in South Carolina, there was turned up a collection of bones, answering by description to those of the mammoth. Their number, variety, and arrangement were such, as entirely to prelude the idea of their having been carried thither as curiosities. The following letter, from the most respectable authority, extends this range still wider:—

"*Washington*, 1804.

"SIR,

"It is with some interest that I have learned from the Baron Hombaldt, who has been five years travelling through South America, that among other curious animal remains, he has discovered several specimens of the mammoth, perfectly distinguished by the great carnivorous teeth. He found them as far as latitude 33 south, but always on the highest mountains; which the baron takes to be satisfactory evidence, that this great unknown must have been the inhabitant of a cold climate. In North America, none of those bones have ever

been found, but in comparitively low situations; this is to be expected of an animal, which in a cold climate, would inhabit the valleys, and in a warm one would seek the cold retreats of the mountains.

"Yours, &c.

"R. P."

Had the opportunities of Mr. Jefferson been greater than it appears they were, or, in other words, had his materials been less scanty, he would not only have given a larger circle for the range of this animal, but he would have discerned the remains of a *Second Incognitum*, whose stature was not, perhaps, inferior to that of the other. These second remains evince a member of the herbivorous order, and, notwithstanding the extraordinary size, I have no hesitation in believing, that the animal was of the genus of the elephant; that he was the mammoth of the Russians, the mehemodi of the Arabians, and the behemoth of Job.

I conceive the word *behemoth* signifies *the beast*, by way of eminence, or the greatest among beasts.

The characters in the 40th chap. of Job, from the 16th verse to the end, appear highly applicable to a distinguished order of the elephant.

" Behold now behemoth, which I made with thee ; he eateth grass as an ox."

The simile, *as an ox*, leads one to suppose some analogy in form. Accordingly the Romans called it *Bos Luca*, the Lucanian beeve ; Lucania being that part of Italy into which Pyrrhus, in his war with the Romans brought them, and where the Romans first saw this creature.

" Lo now, his strength is in his loins, and his force in the navel of his belly.

" He moveth his tail like a cedar ; the sinews of his thighs are wrapped together.

" His bones are as strong as pieces of brass ; his bones are like bars of iron."

This description is too strong for any other animal than the elephant : no other can enter

into competition with him for the largeness and iron-like strength of his ribs, spine, and thigh bones.

" He is the chief of the ways of God's productions ; he that made him can make his sword approach unto him.

" Surely the mountains bring him forth food where all the beasts of the field play."

Three characters of the behemoth are mentioned here. 1. He frequents the mountains. 2. The mountains supply him with food. 3. He is a gentle and sociable animal.

The elephant will graze freely with other animals, whether wild or tame. Among the latter, if they are near enough to be hurt by his sudden movement, he puts them gently by with his proboscis.

" He lieth under the shady trees, in the covert of the reeds, and fens.

" The shady trees cover him with their shadow ; the willows of the brook compass him about . "

These verses describe the behemoth's places of shelter and repose, and, in such places, in general, are his bones found in America at this day.

" Behold he drinketh up a river, and hasteth not; he trusteth that he can draw up Jordan into his mouth."

What is here said seems to convey a sublime idea of the lofty stature, great force, and intrepidity of the behemoth.

" Behold a river overfloweth, yet he maketh not haste; although Jordan break out against his mouth, he is in security."

I may remark in this passage, that the common height of the elephant is 10 ft. and a half. There were some in the stables of Coarees, King of Persia, twelve cubits high. A credible traveller, Sir T. Roe, assures us, that in Indostan he had seen some that were at least 12 ft. high, and was informed, that there were others 14 or 15 ft. in height. The elephant, therefore, can ford most rivers. The Jordan is here mentioned, not as frequented by ele-

phants, but only as put for any deep and violent river: for such the Jordan is in the time of its overflowing.

"He taketh it with his eyes; his nose pierceth through snares."

Job is here called upon, in the most humiliating irony, to try his courage on this large and powerful creature, to take him by open force, and guide him, when taken, with a cord, as he used to manage his camels.

"Let a man take him openly, let him draw a cord through his nose."

The second sentence alludes, I imagine, to the hair noose, or ring, which the Arabs put through the nose of their camels; and by which a line being fastened to it, they bring them to their beck.

The following version of Job's description appears too interesting to be disregarded. I trust you will agree with me in this opinion:—

Behold my behemoth, his bulk uprear,
Made by thy Maker, grazing like a steer.

What strength is seated in each brawny loin!
What muscles brace his amplitude of groin!
Huge like a cedar, see his tail arise;
Large nerves their meshes weave about his thighs:
His ribs are channels of unyielding brass,
His chine a bar of iron's harden'd mass:
My sovereign work; prime of the bestial kind,
In power of body, and in gifts of mind.
I, with a tusky falchion, armed his jaw,
His foe to humble and the desert awe:
In peaceful majesty of might he goes,
And on the mountain tops his forage mows;
Where beasts of ev'ry savage name resort,
And in wild gambols round his greatness sport.
In moory vales, beside the reedy pools,
Deep plunged in ooze, his glowing flanks he cools:
Or in umbrageous groves enjoys repose,
Or bower'd in willows, where the torrent flows.
Not swelling rivers can his heart dismay,
He stalks secure along the wat'ry way.
Should Jordan heap his overflowing waves
Against his mouth, the foaming flood he braves.
Go now, thy courage on this creature try,
Dare the bold duel, meet his open eye,
Sublime on thy gigantic captive ride,
And, with a slender string, his vastness guide.

I now proceed to exhibit the parts which more decidedly mark the remains of the behemoth: they consist, 1*st*, of grinders exclusively worn by animals of the herbivorous or gramini-

vorous kind; *2ndly*, of tusks differently fashioned; and *3rdly*. of bones of an extraordinary magnitude, belonging thereto.

Both the skeleton of the behemoth, and of the stupendous carnivorous incognitum on which I propose to treat in my next memoir, being frequently embedded in company, they have hitherto been confounded together by writers, under the single appellation of mammoth bones: though their appearance and character essentially differ, and distinctly point out two animals of the herbivorous and carnivorous kinds.

The teeth alone unquestionably bespeak this. The masticating surface of the mammoth tooth is flat, nearly smooth, and ribbed transversly, somewhat like the elephant's grinders, but less prominently marked. There are from 15 to 20 of these transverse lines on a single tooth of the mammoth; while, on that of the elephant, they seldom exceed half the number. The masticating surface of the tooth of the carnivorous incognitum is set with four or five high double-coned processes, or studs, strongly coated with enamel. But I refer this

latter subject to the following memoir ; and now beg to recall your attention to what remains to be said on the wonderful subject of our recent speculations. That such an animal did exist in this country and in considerable numbers is certain. The benevolent persuasion, that no link in the chain of creation will ever be suffered to perish, has induced certain authors of distinguished merit, to provide a residence for the mammoth in the remote regions of the north. Some of the North American Indians also believe in the now-existence of this animal, and place him far beyond the Lakes. But their belief rests on mere tradition: for none of them will venture to declare they have seen the animal themselves, or that their information concerning him is drawn from any person who has seen him. The truth is, their tradition does not relate to the mammoth, though it very forcibly applies to the carnivorous incognitum to which I have so often reverted, and with which you will shortly become acquainted. There is considerable evidence, that the behemoth, or mammoth (which I shall in future call it, in compliance with custom) has not been in existence in America for several hundred years. There is no entire ske-

leton of so large an animal, *with herbivorous grinders*, extant; nor have I met with any of its bones in a state of preservation, but such as had been affected by salines and salt. The tusks and grinders alone remain: they in some degree resist the corrosion of time; though I lament to observe, that exposure to external air hastens them to a too sudden decay. The bones of this animal have never been found on the surface of the ground,—but sometimes 12 ft. underneath it,—and in one instance, below a lime-stone rock of immense solidity, which had *grown over them*, in the natural process of some thousand years!

For want of the evidence of the real herbivorous grinders, and in consequence of the inclemency of this hemisphere, Mr. Jefferson could not admit of the existence of an animal, of the genus and sensibility of the elephant, in America; nor could I, were I not firmly convinced from my own careful observations, and the remarks of a celebrated author, M. Volney, that the climate and face of nature is entirely changed. For there is no doubt, that the whole scope of country from above a range of mountains which cross the

Ohio somewhere below the Falls, as high up as Pittsburgh and bordering Lake Eric, was once overwhelmed with water, forming an immense lake; that the summit of those hills was sufficiently high to do this; and that by some great convulsion of nature this barrier was rent to its base, and the waters being thus let loose, the lake above was drained, and the floods, entering from all parts of the higher to the lower grounds, formed the bed of the river now called Ohio. That this immense body of water was salt, appears evident from the immense quantity of coral every where to be found in the presumed bed of this lake; from the remains of submarine plants, fossils, and minerals; and from the bones and petrifactions of animals, which we know look for their appropriate aliment in the sea.

So great a change in the aspect of nature considerably influenced the climate, and, in proportion with its degeneracy, the mammoth pined and ultimately perished.

But admitting the assertion of that distinguished philosopher and statesman, Mr. Jefferson, that the sensibility of the elephant could

never have endured the inclemency of these regions, I will presume to touch the subject on a new ground, and allow it possible, that in consequence of some immense revolution in a more southern climate, the mammoth migrated into this, notwithstanding its being so inimical to his pursuits and affections. And where could this great revolution have happened? Perhaps on the very theatre of Mr. Jefferson's happiest visions,—when he says, "While ruminating on these subjects, I have often been hurried away by fancy, and led to imagine, that what is now the Bay of Mexico was once a campaign country, and that from the point, or cape of Florida there was a continued range of mountains through Cuba, Hispaniola, Porto Rico, Martinique, Guadaloupe, Barbadoes, and Trinidad, till it reached the coast of America, and formed the shores which bounded the ocean, and guarded the country behind; that by some convulsion, or shock of nature, the sea had broken through these mounds, and deluged that vast plain, till it reached the foot of the Andes; that being there heaped up by the trade winds, always blowing from one quarter, it had found its way back, as it continues to do, through the gulph, between Flo-

rida and Cuba, carrying with it the loam and sand it may have scoped from the country it had occupied; part of which it may have deposited on the shores of North America, and with part formed the banks of Newfoundland."

But I weary your attention: honor me with it, however, till we draw from matter so diffuse a few dialectical and useful conclusions.

I have endeavoured to prove, *first*, that bones found throughout America, and commonly called mammoth bones, are the remains of more than one species of non-descript animal; *2dly*, that the real mammoth is a large order of the elephant according with the behemoth of Job; *3dly*, that in consequence he is herbivorous, as manifested by his tusks and grinders;—*4thly*, that this climate was once congenial to his nature, though now so adverse to his pursuits and sensibilities;—*5thly*, that had the climate never suited his affections, still he might have migrated to this country, to avoid some shock of nature in his own; and *6thly*, that the two last axioms lead to a conclusion, that this superb animal exists no more, or that he is only to be found in some of the remote

southern parts of the vast continent of America, yet unpenetrated and unseen.

It may now be asked, whether I have in this memoir, gratified the expectations of the public? Whether I have shed any light on a subject hitherto involved in gloom? And whether I have given all the information which your curiosity may demand, your reason suggest, or your fancy require? Too well convinced of the limits of the human understanding, and of the bounds set to my own, I dare not answer in the affirmative. Much may have escaped my observation and my research: being engaged in travel for several years, or living in parts destitute of books and improved associations, I was denied the assistance, drawn by other naturalists, from such materials, and was compelled to give you unembellished suggestions of my own mind—a mind injured by amalgamation with inhabitants of untutored wastes, where sensibility to grace is soon lost, where felicity of style cannot be gained, and where literary pursuits become at length forgotten!

To merit indulgence, I shall exert all my energies to give my next memoir the interest

you may consider absent from this. The subject matter will be,—the great *Megalonyx*, the monstrous lion of the Greeks; the cruel carnivorous animal of this western world, who was "huge as the frowning precipice; cruel as the bloody panther, swift as the descending eagle, and terrible as the angel of night!"

MEMOIR II.

I FEEL considerable encouragement to proceed in my views, both from the attention with which you distinguished me, and from a reasonable confidence that you are conscious of the difficulties so arduous an undertaking must be exposed to meet. You have the goodness to consider, that it is not with the sciences as it is with the arts. Aided by genius, a Titian or an Angelo, can at one flight reach the summit of his art; but whatever capacity you allow to a naturalist, still, in the wastes of science, he can only advance step by step. In his way he has absurdities to engage, and prejudices to conquer, which require faculties not always at command, and at a time perhaps otherwise to be employed. The principal obstructions which are to be met with in this investigation arise out of the variety of opinions which it has hitherto given birth to. It is necessary to review them.

Those stupendous remains, as I observed

in my first memoir, have been attributed to a giant; to the hippopotamus; to the elephant; to some carnivorous animal; and to some evil spirit, or devil.

This perversion must be owing to the neglect of natural history, or to the insufficient and mutilated evidence alone within the reach of those whose knowledge is contained in their closets, and who have never visited the haunts, or become acquainted with the passions, of the animals whose classification and properties they affect to give. Hence a tooth sent to Paris; a tusk to London, and some mixed fractions to Philadelphia, decide a different character; to which, however, indolence, and the terror attending active enquiry, have assigned the general name of mammoth.

Concerning the real origin of so terrific an animal as the megalonyx, various discordant, contradictory theories have been heard, equally repugnant to common sense, and the principles of sound philosophy. Concerning his early existence I may plead the general tradition of the most ancient nations, and of his present existence I feel unwillingness to doubt. There

appears to be an order in the proceedings of Omnipotence, as regards creation, which we should not break. What a beautiful gradation! In creation there are no chasms; all the parts of it are admirably connected, to make up one universal whole; there is one chain of beings, from the lowest to the highest. The scale of creation does not advance by leaps, but by gentle steps. One rises gradually above another; dead matter, unorganized earth, minerals, vegetables, insects, reptiles, birds, beasts, and man! The truth is, as observes the philosophic author of the "*Notes*," that a pigmy and a Patagonian, a mouse and a mammoth, derive their dimensions from the same nutritive juices. The difference of increment depends on circumstances unsearchable to beings with our capacities. Every race of animals seems to have received from their Maker certain laws of extension. Their elaborative organs were formed to produce this, while proper obstacles were opposed to its further progress. Below these limits they cannot fall; above them they cannot rise. What intermediate station they shall take may depend on soil, on climate, on food, and on a careful choice of breeders. Therefore we are neither to be astonished at the wide and

material difference in animal bulk, nor to encourage the theory of partial extinction: especially we may presume, that the wise Creator of every thing would not suffer so great a link in the chain as the megalonyx to be entirely broken off. He continues every created species, nor can they cease while the earth remaineth, any more than seed time and harvest, cold and heat, summer and winter, day and night.

But to proceed in the manner of my first memoir, I shall revert to the observations of others, before I intrude on you those of my own.

Stralenberg relates, that an entire skeleton of an incognitum was found in Siberia, near Lake Izana Osero; that it was 36 Russian ells long; and so great was the distance between the opposite ribs, that a man standing upright on the concavity of a rib, as the skeleton rested on its side, could not quite reach the opposite one, even with the aid of a pretty long battle axe, which he held in his hand. This account is given as coming from the mouth of the man himself, and who was one of thirty others all eye-witnesses of the fact. Dr. Misserschmidt

had seen the bones of a whole skeleton of a monstrous size, lying in a ditch between Tomskoi and Kasmtsko, on the banks of the river Tomber. Stralenberg also says, that he saw at the city of Tumeer, a skull $2\frac{1}{2}$ ells in length, but this the Russians informed him was one of the smallest size. Muller and Isbrandes Ides go farther, and describe the colour, structure, &c. of some huge incognitum. But what credit can be given to such idle stories, when Ides himself confesses, that he knew of no person that had ever seen a living animal of such extraordinary magnitude?

The fathers of the ancient church thought it to be the devil, and others the elephant. The rabbins affirm, that it is the largest four-footed creature that God has ever created; that in the beginning he made two, the male and the female; the female he killed and salted, to reserve it as an entertainment for the elect, whenever the Messiah shall come; and that the male is still living, which, when this time comes, God will kill also, and give it to the Israelites, who shall then arise from the dead. As a proof of these extravagancies, they often swear by the share they expect in the "great beast."—

Such have been the efforts to deversify the same object: one sect considered it a leviathan of unwieldy bulk, spouting torrents of brine through its spiracles; while another butcher, and pack it in a tub.

It can answer no good purpose to follow this course any farther; and yet I entreat you to return with me to the Shawanece's tradition, notwithstanding my having observed that little faith could be put in it: traditions in general are so clouded with fable, as to obscure any truths they may happen to contain.

However clouded the sublime tradition of the Shawanece Indian may be with fiction, still my experience has discovered a considerable degree of truth to prevail in it. I early discovered, that the description pointed at some stupendous voracious animal; cruel, fleet, and capable of bounding suddenly on his prey. Furnished with carnivorous teeth to consume, and with claws to rend and destroy: in short, a monster of the tiger line, endowed with every bloody and malignant property, and differing in every character but bulk from the mammoth, whose qualities I so lately defined.

I also concluded, that the flat-surfaced grinders, the *defenses*, or tusks, belonged to one and the same animal, of the herbivorous order; and that the teeth, studded with high double-coned processes, would be found to belong to a carnivorous animal, armed with *claws:* in fact the nature of his pursuits would require them: of a form too unwieldly to range thro' the woods, he would have to lie in wait, and spring unexpectedly upon his prey. To effect this act, claws are necessary, and I believe it is a law of nature, that all carnivorous animals should possess them. Whereas tusks, *defenses*, or horns, would be incompatible with the pursuits of such a creature; would retard his progress through the woods, and gather too much wind when coursing his prey in the plains.

These opinions were considerably confirmed: the American philosophical society received a collection of bones here treated of, and among them, the *os calois*, or heel bones, of a clawed animal. This testimony, so flattering, so precious, and so ample to me, served as a subject of mere contention to others: a war ensued. Anatomists entered the lists; philosophers multiplied; and yet the question

remained undecided. The pride of man would not allow a single bone, one small bone, to beat down the edifice his errors had been so long erecting! The advocates of the hippopotamus; of the elephant; of the extraneous fossils; of any herbivorous animal, or of any aquatic one, became confounded, but not convinced. A species of commutation followed, and teeth, tusks, hoofs, and claws, were pitched together, to compose one animal. Not content with this arrangement, I abandoned the scene, and visited the regions where the object of dispute was said to abound; those plains he had once devastated; those lakes in which he had once slacked his thirst.—I soon discovered that I had chosen the proper theatre for the decision of the question.

Nature having blessed these transmontane regions with a bountiful supply of *salines*, or springs of salt water; the earth *there* being soft or spongy, and impregnated with mineral salts is rendered peculiarly fit for the reception and preservation of certain bodies, which, in other places, would undergo a speedy decay. Hence the profusion of large bones beyond the mountains, while on the Atlantic side of them, where

salines are scarce, such remains have but rarely been found. Between the Wabash and the Illinois, a considerable space of a plain is occupied with bones of all descriptions, some on the surface, and some beneath the ground. At a considerable distance back of St. Louis, in Upper Louisiana, there is a large parcel or body of both animal and human bones, mixed altogether promiscuously, over a space of ground of 300 yards, some lying, and others sticking up. Some of the largest order were presented to the Baron Carondolet, while in that country, who pronounced them to belong to an elephant.

Upon either margin of the Big-Bone-Lick, which is a shallow stream of salt water, in the state of Kentucky, flowing into the Ohio, there lies a stratum, extending a considerable distance, composed entirely of the bones of the buffalo, elk, deer, and other smaller animals, as alluded to in the Indian tradition, where it beautifully observes, "the groans of expiring animals were every where heard." But, judge of my surprize, when attentively examining the bones, I discovered, that almost every one of any length, had received a fracture, occa-

sioned, undoubtedly, by the teeth of some carnivorous animal, while in the act of feeding upon his prey. It is well known that the buffalo, deer, elk, and a variety of other animals, are in the constant habit of making such places their resort, in order to drink the salt water, and lick the impregnated earth. Now, may we not from these facts infer, that nature had formed some huge voracious animal, to whom she allotted the beasts of the forest for his food? How can we otherwise account for the numerous fractures that every where mark these strata of bones? May it not be inferred, too, that as the largest and swiftest quadrupeds were appointed for his food, he necessarily was endowed with great strength and activity? That, as the immense volume of the creature would unfit him for coursing after his prey through thickets and woods, nature had furnished him with the power of taking a mighty leap? That this power of springing to a great distance was requisite to the more effectual concealment of his bulky volume while lying in wait for his prey? Is not the Author of Existence wise and just in all his works? Would he confer appetites, and withhold the powers capable of obtaining their gratification?

With the agility and ferocity of the tiger; with a body of unequalled magnitude and strength; this monster must have been the terror of the forest, and of man! And—what monster?——It is true, carried away by an enthusiasm, inspired by the subject, I have not waited to tell you, that such a one did in fact exist. Filled with a strong conviction of his existence, I sought for evidence; I spared no labour; I dug all around, and at length drew from the reluctant earth the remains of a huge carnivorous animal, furnished with high-coned teeth, armed with claws. In fine, "huge as the frowning precipice, cruel as the bloody panther, swift as the descending eagle, and terrible as the angel of night," must have been this tremendous animal, when clothed with flesh and animated with principles of life!

The ruins of *a portion* of his head weigh nearly 200lbs. From the enamel of the teeth, fire can be struck! and the skull must have been 12 inches thick, forming a forehead 4 feet over!

The *scapula*, or shoulder blade, when seen in the earth, was large as a breakfast table; the

decay was too great; on moving it, it fell to pieces.

The *vertebræ* which are seen, shew the spinal marrow to have been 5 inches in diameter! Is not this extraordinary? Not seen, would the tale be credible?

The huge leg and thigh bones, how monstrous, how massive!——What muscles must have filled the inflexions—the wide and hollow insinuosities? And the fragments of ribs! how admirable their construction! Bent on the edge, they are eminently calculated for strengthening a frame ordained to subsist by the destruction of other animals, both active and powerful.

But, above all, I beg your attention to the claw. It is sheathed and retractile; denoting an animal of the lion kind. Justified by principles of anatomy I calculate, that, when extended on its prey, it must have been nearly 4 ft. long by 3 ft. wide, allowing that long and firm membranes interposed between the bones and toes.

There is a beautiful mechanism in the whole of this. The toes were drawn together, or bended, when the paw was bent: this was owing to the shortness of the tendons which pass over the toes, and from the toes being set in the circumference of a circle, as our fingers are. Therefore, when the paw was bent, the tendons would consequently be much stretched; and, since they are inserted into the toes, must of necessity have bent them when the foot was bent; and when the paw or foot was extended, the flexors would again relax, and allow the toes to become expanded,—to seize its prey, rend, and annihilate it.

From this rapid review of these majestic remains *it must appear, that the creature to whom they belonged was nearly* 60 *feet long, and* 2 *feet high!*

Being armed with claws, sheathed and retractile; having the powers, from the formation of his ribs, of extending and contracting his body to a great degree, in order to make more prodigious bounds; and appearing to be endowed with the passions and appetites of the

lion; I have ventured to distinguish him under that genus, and have called him the *Megalonyx*, after the Greek, which signifies the great lion.

However presumptuous this step may appear, I found it essential to take it; in order to avoid the vulgar error of calling it "mammoth," a term already bestowed on an animal of the elephantine species, as heretofore proved, and of the herbivorous nature. Besides, in a place which abounded with bones, I found it absolutely necessary to have some system of classification. For, in fact, I discovered remains of no less than *six* species of incognita; three of which I have not as yet defined. But would it be wise to blend them all together, and, to save the labour of investigation, to involve them all in the name of mammoth? In my first memoir I gave my motives for affixing this name to one particular animal, whose properties I described;—and in this, I give the name of *megalonyx* to another, whose capacities I shall further explain. In zoology, this name will, I imagine, class under *felis*, a genus of quadrupeds belonging to the order of *feræ*, the principal characters of which are these,—the fore teeth are equal, the molares.

or grinders, have three points; the tongue is furnished with rough sharp prickles, pointing backwards; and the claws are sheathed and retractile. This genus comprehends twenty two species, including the megalonyx.

It is said, that in warm countries quadrupeds are larger and stronger than in cold or temperate climates; that they are likewise more fierce and hardy: all their natural qualities corresponding with the ardour of the climate; that the lions nourished under the scorching sun of Africa, or the Indies, are strong, fierce, and terrible; and that those of Mount Atlas, whose top is sometimes covered with snow, are neither so strong nor so ferocious as those of Belledulgired or Zaara, whose plains are covered with burning sands. We have now, however, reason to doubt the justice of these observations, and to conceive, that other causes concur to inspire courage and repress vigour, than the influence of heat and cold. Do we not know—are we not convinced—that an animal of the lion's sensibilities, but far superior to him in magnitude, ferocity, and strength, was once the dread and scourge of all the western world! And what has become of him?

Satisfied of his *once* existing, this question becomes a profitable enquiry.

All noxious quadrupeds hasten to banishment, apparent extinction, or rapid decline. ——The Romans brought many more lions out of Libya, for their public shews, than are now to be found in that country. It is likewise remarked, that the lions in Turkey, Persia, and the Indies, are now much less numerous than formerly. As this formidable and courageous animal makes a prey of most other animals, and is himself a prey to none, this diminution in the number of the species can be owing to nothing but the increase in the number of mankind: for it must be acknowledged, that the strength of the lion is not a match for the dexterity and address of a Negro or a Hottentot, who will often dare to attack him face to face, and this too with very slight weapons. The ingenuity of mankind augments with their number; that of other animals continues always the same. All the noxious animals, therefore, are reduced to a small number, owing as well to the increase of mankind, as to the increase of ingenuity, which has invented weapons that nothing can resist.

These reasons apply to the fall of the megalonyx; with this addition, that as he was so terrific and devastating a disturber, the human race might have made his extirpation a common cause; or his numerous and powerful enemies of the forests might have operated to this effect. There is no question, but that the mammoth was his perpetual rival, and avowed adversary. Wherever they met, they fought; and wherever they fought, one or both fell. Their bones, to this day, are found mingled together on the same surface, or buried deep in the same hole. I hardly know an instance of their being found separately, and where they are so, they have most probably been dragged into such situations by creatures, who dreaded to approach them while alive. But how long the megalonyx has existed, or ceased to exist, in America, we shall perhaps ever remain in ignorance of. No judgment can be formed from the quantity of vegetable soil which has accumulated over his bones. Certain we are, that his species existed in great abundance, from the number of their remains. Perhaps they were destroyed by some sudden and powerful cause,—probably one of those changes, or sudden eruptions of the sea, which

have left their traces in every part of the globe; and which are in amazing abundance on the very spot where these bones are found. They consist of petrefactions of sea productions, shells, corals, &c. It is probable, too, that whenever, and by whatever means, the extirpation of this tremendous race of animals was effected, the same cause operated in the destruction of all those inhabitants, from whom we might have received some satisfactory account of them.

Whether the race is extinct, or whether, as the Indians allege, it still exists beyond the lakes, remains, then, undecided. I am reluctant to think that so grand a monument of All-creative Power would be allowed to be effectually and entirely destroyed! And yet a conclusion may be drawn in favour of its annihilation. The scriptures tell us, that "in the beginning, to man was given the dominion over the fish of the sea, over the fowls of the air, and over every living thing that moved upon the earth." Could the present race of man govern the Megalonyx, supposing he existed in the abundance we are authorised to conceive he did? Certainly not. Therefore, to fulfil an

ordinance in favour of mankind, the race might have been destroyed.

Or, perhaps there has been in this tyrannic animal's day a race of people who had as complete a dominion over that astonishing being, as the present race have over the animals of the present time! If so, what ideas can we have of them? And "how have the mighty fallen!" Here language fails; and man, poor short-sighted man, is lost in clouds of amazement and uncertainty: while, like the poet, we must

> Once more search, undismay'd, the dark profound,
> Where Nature works in secret; view the beds
> Of mineral treasure, and the eternal vault
> That bounds the hoary ocean; trace the forms
> Of atoms, moving with incessant change,
> Their elemental round; behold the seeds
> Of being and the energy of life,
> Kindling the mass with ever-active flame:
> Then to the secrets of the working mind
> Attentive turn; from dim oblivion call
> Her fleet, ideal, band; and bid them 'go
> Break thro' Time's barrier, and o'ertake the hour
> That saw the heav'ns created; then declare
> If ought were ever found in those external scenes
> To move thy wonder now!' For what are all
> The forms which brute, unconscious matter wears,
> Greatness of bulk, or symmetry of parts!

I did not wish to break the train of my own arguments, by introducing the opinions of those, whom I know to be adverse to mine. A love of truth, however, and a desire to give all the information within my means, lead me to notice those opinions.

Bishop Maddison, a gentleman of research and distinguished information, affirms, that the incognitum with the studded grinders is an animal of the herbivorous order. Permit me to give his own reasonings.

" Among rude nations, ignorance and credulity have eagerly embraced and perpetuated extravagant tales, respecting the mammoth. The Siberians assert, that it lives under ground; and the North-west Indians have hurled against it the thunder-bolts of the Great Spirit, so as to make the monster spring over the Wabash, the Illinois, and the Great Lake, where he is now confined! In the scientific world, two dissimilar principles, scepticism, and the bold spirit of conjecture and system, have produced mistakes, perhaps no less extraordinary. At first, the remains alluded to were, by some naturalists, attributed to the elephant, whilst

others advocated a just claim of the hippopotamus to the same. When, in process of time, the light, thrown on the subject by comparative anatomy, determined that they must have belonged to a non-descript animal, distinct from either,—a doubtful point still existed, and invited the attention of the inquisitive.—"Was that animal carnivorous or herbivorous?" Each side of the question long boasted illustrious supporters. Dr. Hunter declared the unknown animal, *carnivorous*. His opinion became mostly prevalent. By some, however, who were unwilling entirely to abandon a favourite idea, it was contended, that he was an animal of the *mixed kind;* that is, capable, like man, like the monkey, the hog, &c. of feeding both upon flesh and upon vegetable substances. But most adopted Hunter's idea, without any modification, and declared the animal positively and exclusively carnivorous. After the decision of this point, curiosity and investigation were excited by another topic of enquiry. This was, to ascertain the element on which he lived in general. Some considered it a *terrestrial* animal; others, from certain indications in its structure, pronounced it *amphibious*, and consigned to it shell-fish, as its favourite food."

The fact contained in the following communication strongly, we might say victoriously, militates against the carnivorous doctrine.—— And facts, says Bishop Maddison, summon the discordant opinions of philosophers before an unerring tribunal, from which there can be no appeal:—

" The question, whether the incognitum was a carnivorous or an herbivorous animal, has long divided naturalists: ingenuity, supported by analogy, afforded specious arguments for either opinion. One fact, which the bosom of nature had concealed, but which human industry has brought to light, has removed every doubt. In digging a well, in a place which afforded indications of marine salt, a passage was made through the contents of the stomach of a vast animal! The novelty of the substances, thus found, excited attention. They were carefully examined, and seemed to be half masticated reeds, and twigs of trees, with grass; whilst the bones of the beast, which were dug up at the same time, and which lay contiguous to these substances, evinced, that they had been the contents of the animal. These contents are in a state of high

preservation; have been seen by hundreds; and were found, together with the bones, resting on a limestone rock, about 5½ feet below the ground, in the county of Wythe, in Virginia. A part of the contents, with the whole skeleton, are to be forwarded to William and Mary College."

There is a rational scepticism, justly recommended by the great Bacon to the lovers of knowledge. Philosophical doubt ought to be carried into every department of science. Repeated experiments, accumulated facts, long and attentive observations, can alone imprint on our theories the sacred seal of truth, and establish our opinions on a permanent basis. And surely you will agree with me, that, according to these remarks, finding a few crushed vegetable substances blended with bones of an animal, is not a sufficient criterion for the discovery of his properties and affections. Besides, a variety of circumstances might have concurred to place the supposed contents of the stomach in the situation they were found. An expiring animal of ferocity and force might have torn and masticated every substance within his reach; —or the matter collected by Bishop Maddison

might have been the contents of the stomach of an herbivorous animal, the carcase of which might have lain under the body of the carnivorous creature with whom it fought, and with whom it fell. For there is no doubt, but that a fixed and perpetual enmity reigned between the mammoth and the megalonyx. Their remains evince this; they are constantly found together; and as we are sufficiently convinced that their pursuits and sensibilities differed, we must ascribe this present union to their former hatred and animosity. I am asked, how it happens, that where the bones of both animals have been embedded together, those of the megalonyx alone principally are found, while those of the mammoth are scarcely discernible? The answer is plain. The bones of all herbivorous animals are, from their nature, subject to decay infinitely sooner than the bones of carnivorous creatures, which are more durable and capable of resistance. Hence, where the mammoth and megalonyx expire together, the bones of the latter may be found entire, and none of the former but its tusks;—which being made of ivory, bid equal defiance to the attacks of time.

Therefore, on the whole, we cannot agree to consider an animal, endowed with carnivorous grinders, to be herbivorous, on the mere ground, that mashed vegetable substances were found in the vicinity of his bones! It would be catching at straws, to support a theory, to me entirely inadmissible. I could prefer meeting the doctrine of those who suppose the animals of a mixed nature; though I have no intention to abandon my own, that he is carnivorous, and unmixed. It is true, notwithstanding, that the lower jaw is furnished with but four teeth, two on each side; and being unassociated either with *incisores* or *canine*, it might be inferred, that his nature was not wholly carnivorous, but mixed;—and that a being, whose existence would require such an immoderate quantity of animal food, might, under circumstances of necessity, be indued with the faculty of subsisting on vegetable substances. As the idea is not unreasonable, I shall not oppose it, though I am far from being of the belief myself.

I shall also be accused of placing an animal of such extreme volume under the genus of

the lion, whose bulk is comparatively small. But is not the diminutive domestic cat of the lion species? May not the lion's race soar as much above, as this degenerate creature sinks beneath, him? Or why is it, that the human mind will admit of mean and contemptible associations, and reject those that are sublime and grand? Are there not a mini, and a whale; a humming bird, and a cassawary; a mouse, and a mammoth; a dwarf, and a giant? Yes. On the same principle, then, we admit a cat, and a megalonyx. It is not the *size* which determines the genus, but the qualities, pursuits, and affections. The size varies more considerably in the lion, than in any other species.—M. de la Landemagon assures us, that he has seen a tiger, in the East Indies, 15 feet long, including, undoubtedly, the length of the tail, which, supposing it to be four feet, makes the body of the tiger eleven feet in length!

A skeleton, preserved in the cabinet of a French King, indicates, that the animal was 7 feet long, from the point of the muzzle to the origin of the tail; and it must be considered, that he was caught young, and lived in confinement all his days.

There is in some parts of India a popular notion, that the rhinoceros and the tiger were in friendship, because they are found near each other. In America the bones of the rhinoceros and megalonyx are in the same vicinity: but I do not attribute this to any former friendship that existed between them. The truth is, the rhinoceros loves to wallow in the mire, and, on that account, frequents salines and the banks of rivers: the megalonyx, to quench his thirst, or find his prey, remained contiguous to the same places.

Nor do I stand alone in the opinion, that animals of the lion race have inhabited America; and though M. Buffon even denies the panther to belong to that country, Mr. Pennant thinks, that the same, or a variety at least, inhabits it. The figure of the species described by Faber, under the name of *tigris Mexicana*, agrees exactly with that of the panther, as does also the description in general. M. Condamini, and Le Pere Cattano, speak of the tigers of America as equal and even superior in size to those of Africa, and the colour as bright as gold; and Ulloa describes them as big as a horse! Notwithstanding the venders of furs

cannot be depended upon, as to the countries their goods come from, yet the general opinion of the whole trade, that these skins were the produce of Spanish America, is a further proof of their being common to both continents.

From the remains, then, before us; from all the foregoing remarks; and, above all, from the conviction that the megalonyx is of the lion kind, let us form to ourselves some idea of his character.

His length 60 ft. his height 25; his figure magnificent; his looks determined; his gait stately; his voice tremendous! In a word, his body must have been the best model of deadly strength, joined to the greatest agility. And, from the force expressed by the visible seat of his muscles, his bounds must have been prodigious, enabling him to fall upon his prey, to seize it with his teeth; tear it with his claws, and devour it. Accustomed to measure his strength with that of all other animals he used to encounter, the habit of conquering must have rendered him haughty and intrepid!

Having, perhaps, never experienced the

strength of man, or the power of his arms, instead of discovering any signs of fear, he would disdain and set an army at defiance! Wounds might irritate, but they could not terrify him; and after a violent and obstinate engagement, should he find himself weakened, he would retreat fighting, always keeping his face to the enemy, looking proud, great, and ferocious.

THE END.

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